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Institute of Management & Technology

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Reference Material for Three Years

Bachelor of Commerce (Hons.)

Code : 888

Semester- III

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Three Years Bachelor of Commerce (Hons.)

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Semester – III

MARKETING MANAGEMENT (201)

Unit-1

According to American Marketing Association (2004) – "Marketing is an organisational function and set of processes for creating, communicating and delivering value to customers and for managing relationships in a way that benefits both the organisation and the stakeholder."

According to Kotler (2000) – "A societal process by which individuals and groups obtain what they need and want through creating, offering, and freely exchanging products and services of value with others."

Nature of Marketing

1. **Marketing is an economic function**

Marketing embraces all the business activities involved in getting goods and services, from the hands of producers into the hands of final consumers. The business steps through which goods progress on their way to final consumers is the concern of marketing.

2. **Marketing is a Legal Process by which ownership transfers**

In the process of marketing the ownership of goods transfers from seller to the purchaser or from producer to the end user.

3. **Marketing is a System of interacting Business Activities**

Marketing is that process through which a business enterprise, institution, or organisation interacts with the customers and stakeholders with the objective to earn profit, satisfy customers, and manage relationship. It is the performance of business activities that direct the flow of goods and services from producer to consumer or user.

4. **Marketing is a managerial function**

According to managerial or systems approach – "Marketing is the combination of activities designed to produce profit through ascertaining, creating, stimulating, and satisfying the needs and/or wants of a selected segment of the market.”

5. **Marketing is a social process**

Marketing is the delivery of a standard of living to society. According to Cunningham and Cunningham (1981) societal marketing performs three essential functions:-

1. Knowing and understanding the consumer’s changing needs and wants;
2. Efficiently and effectively managing the supply and demand of products and services; and
3. Efficient provision of distribution and payment processing systems.

6. Marketing is a philosophy based on consumer orientation and satisfaction

7. Marketing had dual objectives – profit making and consumer satisfaction

Scope of Marketing

1. **Study of Consumer Wants and Needs**
Goods are produced to satisfy consumer wants. Therefore study is done to identify consumer needs and wants. These needs and wants motivates consumer to purchase.

2. **Study of Consumer behaviour**
Marketers performs study of consumer behaviour. Analysis of buyer behaviour helps marketer in market segmentation and targeting.

3. **Production planning and development**
Product planning and development starts with the generation of product idea and ends with the product development and commercialization. Product planning includes everything from branding and packaging to product line expansion and contraction.

4. Pricing Policies
Marketer has to determine pricing policies for their products. Pricing policies differsform product to product. It depends on the level of competition, product life cycle, marketing goals and objectives, etc.

5. Distribution
Study of distribution channel is important in marketing. For maximum sales and profit goods are required to be distributed to the maximum consumers at minimum cost.

6. Promotion
Promotion includes personal selling, sales promotion, and advertising. Right promotion mix is crucial in accomplishment of marketing goals.

Market segmentation

Market segmentation is the process of dividing a market of potential customers into groups, or segments, based on different characteristics. The segments created are composed of consumers who will respond similarly to marketing strategies and who share traits such as similar interests, needs, or locations.

Why is market segmentation important for marketers?

Market segmentation makes it easier for marketers to personalize their marketing campaigns.

By arranging their company's target market into segmented groups, rather than targeting each potential customer individually, marketers can be more efficient with their time, money, and other resources than if they were targeting consumers on an individual level. Grouping similar consumers together allows marketers to target specific audiences in a cost effective manner.

Market segmentation also reduces the risk of an unsuccessful or ineffective marketing campaign. When marketers divide a market based on key

characteristics and personalize their strategies based on that information, there is a much higher chance of success than if they were to create a generic campaign and try to implement it across all segments.

Marketers can also us segmentation to prioritize their target audiences. If segmentation shows that some consumers would be more likely to buy a product than others, marketers can better allocate their attention and resources.

Importance of Targeting in Marketing

Targeting in marketing is a strategy that breaks a large market into smaller segments to concentrate on a specific group of customers within that audience. It defines a segment of customers based on their unique characteristics and focuses solely on serving them.

Instead of trying to reach an entire market, a brand uses target marketing to put their energy into connecting with a specific, defined group within that market.

The types of target markets are often segmented by characteristics such as:

- Demographics: age, gender, education, marital status, race, religion, etc.
- Psychographics: values, beliefs, interests, personality, lifestyle, etc.
- Business Industry: business industry or vertical
- Geographic Areas: neighbourhood, area code, city, region, country, etc.

Through this strategy of market segmentation, brands get more specific about their target market. They can focus on a small group of customers who will be most likely to benefit from and enjoy their products.

For example, a brand that sells day planners may decide to focus on a smaller, specific target market. Instead of marketing to the masses, they may focus solely on selling planners to female business owners. Or they could choose to exclusively market to high school teachers. Both examples are smaller, more specific segments of the day planner's potential market.

Why Is Targeting in Marketing So Important?

Targeting in marketing is important because it's a part of a holistic marketing strategy. It impacts advertising, as well as customer experience, branding, and business operations. When your company focuses on target market segmentation, you can do the following:

Speak directly to a defined audience. Marketing messages resonate more deeply with audiences when readers can relate directly to the information. Brands that have a large, varied market of customers often struggle with creating marketing campaigns that speak directly to their audience. Because their viewers are very different, few slogans or stories can resonate with each person on a personal level. Through target marketing, you can alleviate this problem and focus on crafting messages for one specific audience.

Attract and convert high-quality leads. When you speak directly to the people you want to target, you are more likely to attract the right people. Your marketing will more effectively reach the people most likely to want to do business with you. When you connect with the right people, you are then more likely to get high-quality, qualified leads that will turn into paying customers.

Differentiate your brand from competitors. When you stop trying to speak to every customer in your market and start focusing on a smaller segment of that audience, you also start to stand out from competitors in your industry. When customers can clearly identify with your brand and your unique selling propositions, they will choose you over a competitor that isn't specifically speaking to or targeting them. You can use your positioning in marketing to make your brand more well-known and unique.

Build deeper customer loyalty. The ability to stand out from competitors by reaching your customers on a more personal, human level also creates longer-lasting relationships. When customers identify with your brand and feel like you are an advocate for their specific perspectives and needs, they will likely be more loyal to your brand and continue to do business with you over a longer period of time.

Improve products and services. Knowing your customers more intimately also helps you look at your products and services in a new way. When you have a deep understanding of your target audience, you can put yourself in their shoes and see how you can improve your offerings. You can see what features you can add to better serve your customers.

Stay focused. Finally, the benefit of using targeting in marketing is that it also serves to help your brand and team. Target marketing allows you to get more specific about your marketing strategies, initiatives, and direction of your brand. It helps you clarify your vision and get everyone in the organization on the same page. You have more direction when it comes to shaping upcoming plans for both marketing and the business as a whole. A focused approach helps you fully optimize your resources, time, and budget.

Market Positioning

What is market position? In marketing and business strategy, market position refers to the consumer's perception of a brand or product in relation to competing brands or products. Market positioning refers to the process of establishing the image or identity of a brand or product so that consumers perceive it in a certain way.

For example, a car maker may position itself as a luxury status symbol. Whereas a battery maker may position its batteries as the most reliable and long-lasting. And a fast-food restaurant chain may position itself as a provider of cheap and quick standardized meals. A coffee company may position itself as a source of premium upscale coffee beverages. Then a retailer might position itself as a place to buy household necessities at low prices. And a computer company may position itself as offering hip, innovative, and use-friendly technology products.

Positioning of a Brand

The positioning of a brand or product is a strategic process that involves marketing the brand or product in a certain way to create and establish an image or identity within the minds of the consumers in the target market. Market positioning of a brand or product must be maintained over the life of the brand or product. Doing this requires ongoing marketing initiatives intended to reinforce the target market's perceptions of the product or brand.

Unit 2

Introduction to Product Strategy

All great products start with a clear strategy that is customer and market-driven. Your strategy defines the direction of your product and what you want to achieve. Establishing this first aligns the organization and keeps everyone focused on the work that matters the most. It tells the team where the product is headed and what needs to be done to get there.

The main purpose of a strategy is to align executives and other key stakeholders around how the product will achieve the high-level business objectives. It also provides the product manager with a clear direction to guide the team through implementation and to communicate the value of the product to cross-functional teams, such as sales, marketing, and support.

A product strategy is the foundation for the entire product lifecycle. As product leaders develop and adjust their product strategy, they zero in on target audiences and define the key product and customer attributes necessary to achieve success.

Strategy is comprised of three parts: vision, goals, and initiatives.

A product innovation is the introduction of a good or service that is new or significantly improved with respect to its characteristics or intended uses. These include significant improvements in technical specifications, components and materials, incorporated software, user friendliness or other functional characteristics. Product innovations include both new products and new uses for existing products:

- New products. These are goods and services that differ significantly in their characteristics or intended uses from products previously produced by the firm. The first microprocessors and digital cameras are examples of new products using new technologies. The first portable MP3 player, which combined existing software standards with miniaturised hard-drive technology, was a new product combining existing technologies.

- New uses for products. The development of a new use for a product with only minor changes to its technical specifications is a product innovation. An example is the introduction of a new detergent using an existing chemical composition that was previously used as an intermediary for coating production only.

Product diffusion

Diffusion is the process by which a new idea or new product is accepted by the market. The rate of diffusion is the speed with which the new idea spreads from one consumer to the next. Adoption (the reciprocal process as viewed from a consumer perspective rather than distributor) is similar to diffusion except that it deals with the psychological processes an individual goes through, rather than an aggregate market process. In economics it is more often named "technological change".

There are several theories that purport to explain the mechanics of diffusion:

1. The two-step hypothesis – information and acceptance flows, via the media, first to opinion leaders, then to the general population
2. The trickle-down effect – products tend to be expensive at first, and therefore only accessible to the wealthy social strata – in time they become less expensive and are diffused to lower and lower strata.
3. The Everett Rogers Diffusion of innovations theory – for any given product category, there are five categories of product adopters:
    - Innovators – venturesome, educated, multiple info sources;

- Early adopters – social leaders, popular, educated;
- Early majority – deliberate, many informal social contacts;
- Late majority – sceptical, traditional, lower socio-economic status;
- Laggards – neighbours and friends are main info sources, fear of debt.

4. Crossing the Chasm model developed by Geoffrey Moore – This model overlays the Everett Rogers' adoption curve with a 'chasm'. According to Moore, the marketer should focus on one group of customers at a time, using each group as a base for marketing to the next group. The most difficult step is making the transition between visionaries (early adopters) and pragmatists (early majority). This is the chasm that he refers to. Technologies or products that cannot cross this chasm will die or remain niche. If successful, a firm can create a bandwagon effect in which the momentum builds and the product becomes ubiquitous.
5. Technology driven models – These are particularly relevant to software diffusion. The rate of acceptance of technology is determined by factors such as ease of use and usefulness.

Product Life Cycle Stages Explained

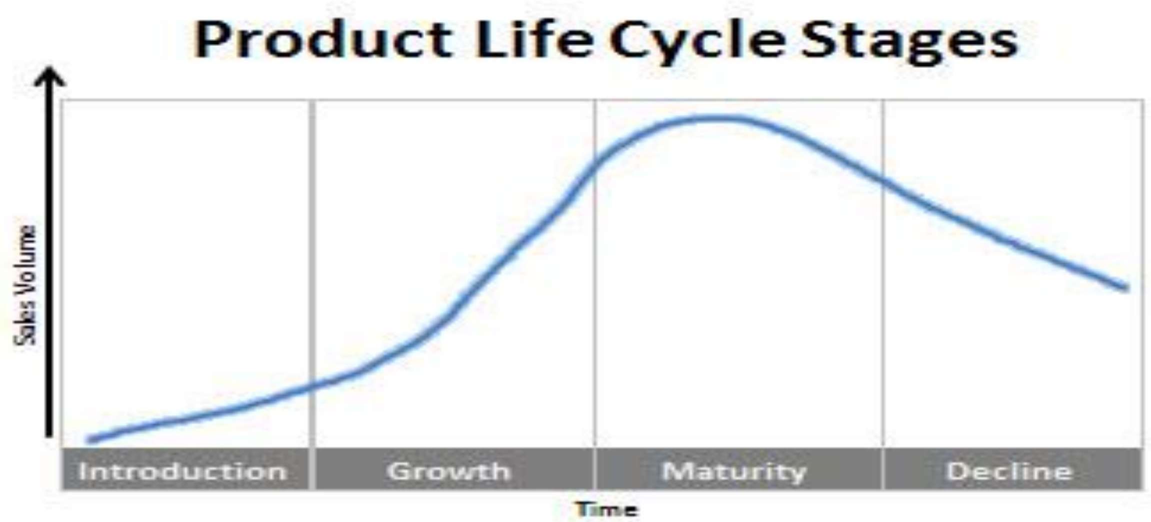
The product life cycle has 4 very clearly defined stages, each with its own characteristics that mean different things for business that are trying to manage the life cycle of their particular products.

Introduction Stage – This stage of the cycle could be the most expensive for a company launching a new product. The size of the market for the product is small, which means sales are low, although they will be increasing. On the other hand, the cost of things like research and development, consumer testing, and the marketing needed to launch the product can be very high, especially if it's a competitive sector.

Growth Stage – The growth stage is typically characterized by a strong growth in sales and profits, and because the company can start to benefit from economies of scale in production, the profit margins, as well as the overall amount of profit, will increase. This makes it possible for businesses to invest more money in the promotional activity to maximize the potential of this growth stage.

Maturity Stage – During the maturity stage, the product is established and the aim for the manufacturer is now to maintain the market share they have built up. This is probably the most competitive time for most products and businesses need to invest wisely in any marketing they undertake. They also need to consider any product modifications or improvements to the production process which might give them a competitive advantage.

Decline Stage – Eventually, the market for a product will start to shrink, and this is what's known as the decline stage. This shrinkage could be due to the market becoming saturated (i.e. all the customers who will buy the product have already purchased it), or because the consumers are switching to a different type of product. While this decline may be inevitable, it may still be possible for companies to make some profit by switching to less-expensive production methods and cheaper markets.



Product mix

Product mix, also known as product assortment, refers to the total number of product lines a company offers to its customers. For example, your company may sell multiple lines of products. Your product lines may be fairly similar, such as dish washing liquid and bar soap, which are both used for cleaning and use similar technologies. Or your product lines may be vastly different, such as diapers and razors. The four dimensions to a company's product mix include width, length, depth and consistency.

Pricing Strategies in Marketing

- ✓ Penetration Pricing or Pricing to Gain Market Share
- ✓ Economy pricing or No Frill Low Price
- ✓ Use of Psychological Pricing Strategies

- ✓ Pricing Strategies of Product Line
- ✓ Pricing Optional Products
- ✓ Pricing of Captive Products
- ✓ Pricing for promotions
- ✓ Pricing as Per Geographic Locations
- ✓ Value Pricing a Product
- ✓ Pricing of Premium Products

Pricing strategies

A business can use a variety of pricing strategies when selling a product or service. The price can be set to maximize profitability for each unit sold or from the market overall. It can be used to defend an existing market from new entrants, to increase market share within a market or to enter a new market.The 4Pcs of Pricing Pricing is one of the most vital and highly demanded component within the theory of marketing mix.

It helps consumers to have an image of the standards the firm has to offer through their products, creating firms to have an exceptional reputation in the market. The firm's decision on the price of the product and the pricing strategy impacts the consumer's decision on whether or not to purchase the product. When firms are deciding to consider applying any type of pricing strategy they must be aware of the following reasons in order to make an appropriate choice which will benefit their business. The competition within the market today is extremely high, for this reason, businesses must be attentive to their opponent's actions in order to have the comparative advantage in the market. The technology of internet usage has increased and developed dramatically therefore, price comparisons can be done by customers through online access. Consumers are very selective regarding the purchases they make due to their knowledge of the monetary value. Firms must be mindful of these factor and price their products accordingly

Absorption pricing

Method of pricing in which all costs are recovered. The price of the product includes the variable cost of each item plus a proportionate amount of the fixed costs.

Contribution margin-based pricing

Contribution margin-based pricing maximizes the profit derived from an individual product, based on the difference between the product's price and variable costs (the product's contribution margin per unit), and on one's assumptions regarding the relationship between the product's price and the number of units that can be sold at that price. The product's contribution to total firm profit (i.e. to operating income) is maximized when a price is chosen that maximizes the following: (contribution margin per unit) *X* (number of units sold).

In cost-plus pricing, a company first pricing determines its break-even price for the product. This is done by calculating all the costs involved in the production such as raw materials used in its transportation etc., marketing and distribution of the product. Then a markup is set for each unit, based on the profit the company needs to make, its sales objectives and the price it believes customers will pay. For example, if the company needs a 15 percent profit margin and the break-even price is $2.59, the price will be set at $3.05 ($2.59 / (1-15%)

Creaming or skimming

in most skimming, goods are higher priced so that fewer sales are needed to break even. Selling a product at a high price, sacrificing high sales to gain a high profit is therefore "skimming" the market. Skimming is usually employed to reimburse the cost of investment of the original research into the product: commonly used in electronic markets when a new range, such as DVD players, are firstly sold at a high price. This strategy is often used to target "early adopters" of a product or service. Early adopters generally have a relatively lower price-sensitivity—this can be attributed to: their need for the product outweighing their need to economise; a greater understanding of the product's value; or simply having a higher disposable income.

Marginal-cost pricing

in business, the practice of setting the price of a product to equal the extra cost of producing an extra unit of output. By this policy, a producer charges, for each product unit sold, only the addition to total cost resulting from materials and direct labor. Businesses often set prices close to marginal cost during periods of poor sales. If, for example, an item has a marginal cost of $1.00 and a normal selling price is $2.00, the firm selling the item might wish to lower the price to $1.10 if demand has waned. The business would choose this approach because the incremental profit of 10 cents from the transaction is better than no sale at all.

Cost plus pricing

Cost plus pricing is a cost-based method for setting the prices of goods and services. Under this approach, the direct material cost, direct labor cost, and overhead costs for a product are added up and added to a markup percentage (to create a profit margin) in order to derive the price of the product

Penetration pricing

Penetration pricing includes setting the price low with the goals of attracting customers and gaining market share. The price will be raised later once this market share is gained

A firm that uses a penetration pricing strategy prices a product or a service at a smaller amount than its usual, long range market price in order to increase more rapid market recognition or to increase their existing market share. This strategy can sometimes discourage new competitors from entering a market position if they incorrectly observe the penetration price as a long range price.

Companies do their pricing in diverse ways. In small companies, prices are often set by the boss. In large companies, pricing is handled by division and the product line managers. In industries where pricing is a key influence, pricing departments are set to support others in determining suitable prices.

Penetration pricing strategy is usually used by firms or businesses who are just entering the market. In marketing it is a theoretical method that is used to lower the prices of the goods and services causing high demand for them in the future. This strategy of penetration pricing is vital and highly recommended to be applied over multiple situations that the firm may face. Such as, when the production rate of the firm is lower when compared to other firms in the market and also sometimes when firms face hardship into releasing their product in the market due to extremely large rate of competition. In these situations it is appropriate for a firm to use the penetration strategy to gain consumer attention

Predatory pricing

Predatory pricing, also known as aggressive pricing (also known as "undercutting"), intended to drive out competitors from a market. It is illegal in some countries.

Companies or firms that tend to get involved with the strategy of predatory pricing often have the goal to place restrictions or a barrier for other new businesses from entering the applicable market. It is an unethical act which contradicts anti–trust law, attempting to establish within the market a monopoly by the imposing Company. Predatory pricing mainly occurs during price competitions in the market as it is an easy way to obfuscate the unethical and illegal act. Using this strategy, in the short term consumers will benefit and be satisfied with lower cost products. In the long run, firms often will not benefit as this strategy will continue to be used by other businesses to undercut competitors margins, causing an increase in competition within the field and facilitating major losses. This strategy is dangerous as it could be destructive to a firm in terms of losses and even lead to complete business failure.

Unit-3

Channels of distribution

Different types of channel of distribution are as follows:

Manufacturers and consumers are two major components of the market. Intermediaries perform the duty of eliminating the distance between the two. There is no standardised level which proves that the distance between the two is eliminated.

Based on necessity the help of one or more intermediaries could be taken and even this is possible that there happens to be no intermediary. Their description is as follows:

(A**) Direct Channel or Zero Level Channels:**

When the manufacturer instead of selling the goods to the intermediary sells it directly to the consumer then this is known as Zero Level Channel. Retail outlets, mail order selling, internet selling and selling

(B) Indirect Channels:

When a manufacturer gets the help of one or more middlemen to move goods from the production place to the place of consumption, the distribution channel is called indirect channel. Following are the main types of it:

1. One Level Channel:

In this method an intermediary is used. Here a manufacturer sells the goods directly to the retailer instead of selling it to agents or wholesalers. This method is used for expensive watches and other like products. This method is also useful for selling FMCG (Fast Moving Consumer Goods). This channel is clarified in the following diagram:

2. Two Level Channel:

In this method a manufacturer sells the material to a wholesaler, the wholesaler to the retailer and then the retailer to the consumer. Here, the wholesaler after purchasing the material in large quantity from the manufacturer sells it in small quantity to the retailer.

Then the retailers make the products available to the consumers. This medium is mainly used to sell soap, tea, salt, cigarette, sugar, ghee etc. This channel is more clarified in the following diagram:

3. Three Level Channel:

Under this one more level is added to Two Level Channel in the form of agent. An agent facilitates to reduce the distance between the manufacturer and the wholesaler. Some big companies who cannot directly contact the wholesaler, they take the help of agents. Such companies appoint their agents in every region and sell the material to them.

Then the agents sell the material to the wholesalers, the wholesaler to the retailer and in the end the retailer sells the material to the consumers

Marketing logistics

Marketing logistics involve planning, delivering, and controlling the flow of physical goods, marketing materials and information from the producer to a market as necessary to meet customer demands while still making a satisfactory profit. Maintaining an organization's competitive edge means understanding and implementing an effective marketing logistics strategy regarding product, price, place and promotion. These four functions of marketing logistics help the organization to reach the target customers and deliver the products or services sold by the organization to these customers.

Product Delivery

One function of logistics marketing is finding out who your customer is and how to get the product or service to the customer. Each customer can have individualized needs so the logistical services provided may vary from customer to customer. Regardless of these differences, the customers expects 100 percent conformance and assured reliability at all times with every transaction. The goals of this aspect of marketing logistics include filling the order, on-time delivery, precise invoicing and zero damage.

Price

An organization bases pricing decisions on both internal and external factors. Marketing logistics must recognize price drivers. The profile of the customer, the product and the type of order are factors that drive the price. These changes are not typically controlled by marketing logistics. However, marketing logistics must react to these factors and understand how the factors affect customers' decisions. Discounts for quantities and the related logistical cost structure can impact the price the customer will ultimately pay for the product or service. Additional factors driving price include the shipping costs based on the size, weight and distance the organization will ship the item. Further, the size of the manufacturing run, labor costs and the types, quantities and quality of the materials used in the manufacturing process can affect price.

Promotion

Promotion is another important aspect of an organization’s marketing logistics process. When bringing a product to market, the organization must coordinate the logistics of the various marketing materials. For example, the art department might design the artwork for the product's box and an outside supplier might manufacture the boxes with the artwork. Marketing logistics can help to ensure that all of these entities work together and produce the marketing materials needed to sell the product.

Place

The function of place in marketing logistics allows the organization to simplify the transactions between a logistics provider and the customer. The organization must execute logistics in such a way that the customer is not aware of the complexities involved in the logistics process. For the customer, the output is always more important than the process. The organization should, therefore, never expose the backroom processes involved with logistics delivery to the customer. Also the location of the factory, warehouse and customer can greatly impact the marketing logistics process by increasing or reducing costs. For example, locating a factory in Mexico might reduce the labor costs associated with a product. However, at the same time locating the factory in Mexico might increase the shipping costs and negate any cost savings.

What is 'Supply Chain Management (SCM)'

Supply chain management is the management of the flow of goods and services and includes all processes that transform raw materials into final products. It involves the active streamlining of a business's supply-side activities to maximize customer value and gain a competitive advantage in the marketplace. SCM represents an effort by suppliers to develop and implement supply chains that are as efficient and economical as possible. Supply chains cover everything from production to product development to the information systems needed to direct these undertakings.

Supply Chain

A supply chain is the connected network of individuals, organizations, resources, activities, and technologies involved in the manufacture and sale of a product or service. A supply chain starts with the delivery of raw materials from a supplier to a manufacturer and ends with the delivery of the finished product or service to the end consumer. SCM oversees each touch point of a company's product or service, from initial creation to the final sale. With so many places along the supply chain that can add value through efficiencies or lose value through increased expenses, proper SCM can increase revenues, decrease costs, and impact a company's bottom line.

Example of SCM

Understanding the importance of SCM to its business, Walgreens Boots Alliance Inc. placed focused effort on transforming its supply chain in 2016. The company operates the second largest pharmacy chain in the United States and needs to efficiently manage and revise its supply chain so it stays ahead of the changing trends and continues to add value to its bottom line.

As of July 5, 2016, Walgreens has invested in the technology portion of its supply chain. It implemented a forward-looking SCM that synthesizes relevant data and uses analytics to forecast customer purchase behavior, and then it works its way back up the supply chain to meet that expected demand. For example, the company can anticipate flu patterns, which allow it to accurately forecast needed inventory for over-the-counter flu remedies, creating an efficient supply chain with little waste. Using this SCM, the company can reduce excess inventory and all of the inventories' associated costs, such as the cost of warehousing and transportation.

Unit-4

Advertising

Advertising is the best way to communicate to the customers. Advertising helps informs the customers about the brands available in the market and the variety of products useful to them. Advertising is for everybody including kids, young and old. It is done using various media types, with different techniques and methods most suited.

Objectives of Advertising

Let’s take a look on these various types of objectives.

1. Trial: the companies which are in their introduction stage generally work for this objective. The trial objective is the one which involves convincing the customers to buy the new product introduced in the market. Here, the advertisers use flashy and attractive ads to make customers take a look on the products and purchase for trials.
2. Continuity: this objective is concerned about keeping the existing customers to stick on to the product. The advertisers here generally keep on bringing something new in the product and the advertisement so that the existing customers keep buying their products.
3. Brand switch: this objective is basically for those companies who want to attract the customers of the competitors. Here, the advertisers try to convince the customers to switch from the existing brand they are using to their product.
4. Switching back: this objective is for the companies who want their previous customers back, who have switched to their competitors. The advertisers use different ways to attract the customers back like discount sale, new advertise, some reworking done on packaging, etc.

Importance of Advertising

Advertising plays a very important role in today’s age of competition. Advertising is one thing which has become a necessity for everybody in today’s day to day life, be it the producer, the traders, or the customer. Advertising is an important part. Lets have a look on how and where is advertising important:

Advertising is important for the customers

Just imagine television or a newspaper or a radio channel without an advertisement! No, no one can any day imagine this. Advertising plays a very important role in customers life. Customers are the people who buy the product only after they are made aware of the products available in the market. If the product is not advertised, no customer will come to know what products are available and will not buy the product even if the product was for their benefit. One more thing is that advertising helps people find the best products for themselves, their kids, and their family. When they come to know about the range of products, they are able to compare the products and buy so that they get what they desire after spending their valuable money. Thus, advertising is important for the customers.

Advertising is important for the seller and companies producing the products

Yes, advertising plays very important role for the producers and the sellers of the products, because

- Advertising helps increasing sales
- Advertising helps producers or the companies to know their competitors and plan accordingly to meet up the level of competition.
- If any company wants to introduce or launch a new product in the market, advertising will make a ground for the product. Advertising helps making people aware of the new product so that the consumers come and try the product.
- Advertising helps creating goodwill for the company and gains customer loyalty after reaching a mature age.
- The demand for the product keeps on coming with the help of advertising and demand and supply become a never ending process.
- Advertising is important for the society
- Advertising helps educating people. There are some social issues also which advertising deals with like child labour, liquor consumption, girl child killing, smoking, family planning education, etc. thus, advertising plays a very important role in society.

Personal Selling

Definition: Personal selling is also known as face-to-face selling in which one person who is the salesman tries to convince the customer in buying a product. It is a promotional method by which the salesperson uses his or her skills and abilities in an attempt to make a sale.

Personal selling is a face-to-face selling technique by which a salesperson uses his or her interpersonal skills to persuade a customer in buying a particular product. The salesperson tries to highlight various features of the product to convince the customer that it will only add value. However, getting a customer to buy a product is not the motive behind personal selling every time. Often companies try to follow this approach with customers to make them aware of a new market

The company wants to spread awareness about the product for which it adopts a person-to-person approach. This is because selling involves personal touch, a salesperson knows better how to pitch a product to the potential customer. Personal selling can take place through two different channels – through retail and through direct-to-consumer channel. Under the retail channel, a sales person interacts with potential customers who come on their own to enquire about a product. The job of the salesperson is to make sure that he understands the need of the customers and accordingly shows various products that he keeps under that category. Under the direct channel, a salesperson visits potential customers in an attempt to make them aware about a new product that the company is launching or it may have a new offer which the customers may not get from the open market.

Need for Personal Selling:

Despite the dominance of advertising, in the present day commercial world, personal selling still occupies its unique place; co-existing with advertising.

Some of the reasons for the need of personal selling are as follows:

(i) ***Requirements of Product Demonstration:***

There are certain products which require a demonstration, for purposes of explaining their use, manner of their handling and the precautions required in using them. This requirement for product demonstration necessitates personal selling; as no advertising media cannot undertake this work.

A good instance of products requiring demonstration is a washing machine, used in households. A salesman is required for explaining the operation of a washing machine to housewives.

(ii) Illiterate Prospects:

Where a manufacturer is interested in selling some of his products to prospects, who, by and large, are literate; personal selling is necessary. Illiterate prospects could not be expected to appreciate the need and utility for a product-just through advertising.

Salesmen are needed to approach such illiterate prospects, who would explain the usefulness of the products to them, in a convincing style.

(iii) Traditional Necessity of Personal Selling:

There are cases of products, where advertising is not usually done; partly due to the technical or specialized nature of products and partly due to traditions. In cases of such products, therefore, personal selling is necessitated to meet the requirements of tradition prevalent in particular trades.

Examples of such products as require personal selling are:

(1) Medicines, where salesmen (called medical representatives) still go from doctor to doctor or from hospital to hospital, canvassing new medicines manufactured by their pharmaceutical companies.

(2) Industrial goods (like new machines or spare parts), where salesmen visit various industrial houses and convince the industrialists, of the utility of the new industrial goods manufactured by their companies.

(iv*) Emergence of an Entirely New Type of Product:*

In case of innovations, i.e. entirely new types of products, manufactured by a producer, salesmen are appointed by the producer to publicize such new products to prepare a base for demand creation. Then, through subsequent advertising, by the manufacturer, demand base is further expanded.

(v) *Need to Develop Relations with Customers:*

Personal selling helps a manufacturer to develop good relations with customers/prospects. Through advertising alone, development of relations with customers is not possible. This factor again necessitates personal selling and accounts for its survival, in the present-day times.

(vi) Source of Marketing Research Data:

Salesmen, because of their interactions with customers, prospects, dealers etc., are able to provide valuable data to the manufacturer about market trends, consumer preferences, degree of market competition etc.; which are utilized for marketing research purposes.

Some of the manufacturers appoint salesmen precisely for this purpose, besides expecting them to create more sales. This factor, therefore, becomes a modern factor necessitating salesmanship; and accounting for its survival under the modern marketing conditions.

(vii) To Remove Misconceptions Caused by Competitive Advertising:

In the modern marketing world, competitive advertising has become so aggressive that one competitor would not hesitate in defaming the products of others for the sake of building a reputation for his own product.

sales promotion

Sales promotion is a type of Pull marketing technique. If you have a product which is new in the market or which is not receiving a lot of attention, then you can promote this product to customers via sales promotions. You can use various techniques like giving discounts on the product, offering 1 + 1 free schemes, etc etc.

There are two types of Sales promotions

a) Consumer sales promotions

Any sales promotion activity that you do keeping the end consumer in mind is known as consumer sales promotions. Example – if an E-commerce website gives 10% discount on its products, then it wants the consumers to make the best of this deal. This is a consumer focused promotional activity and hence can be called as consumer sales promotions.

The objective of Consumer sales promotions might be various. A consumer might be asked to test a sample of a completely new perfume in the market and rate it. An existing customer might be asked to use a Scratch card so that he receives a gift.

At the end, the result should be an action from the consumer. Either the consumer should purchase the product right away, or he should come to know about the product so that further awareness is created for the brand.

b) Trade Sales promotions

If your promotional activities are focused on Dealers, distributors or agents, then it is known as trade promotions. There is a lot of competition in any field. And in channel sales, to get the products moving and to motivate the dealer to perform better, trade discounts are given.

SALES MANAGEMENT » What is Sales promotion and what are the types of sales promotions?
What is Sales promotion and what are the types of sales promotions?

Chances are, right now if you step out in the market, you will find a shop offering discounts on all its products. Similarly, you might find a dealer strongly pushing one brand over the other. These are perfect examples of Sales promotions in action.

What is sales promotion?

Sales promotion is a type of Pull marketing technique. If you have a product which is new in the market or which is not receiving a lot of attention, then you can promote this product to customers via sales promotions. You can use various techniques like giving discounts on the product, offering 1 + 1 free schemes, etc etc.

When a brand wants to increase the sales of its products, it uses Sales promotion. The brand can increase the sales by attracting new customers to their products or by retaining the old customers by various means. The company can also motivate the dealers and distributors of their channel to perform better for their brand, and to get their stock moving.

There are two types of Sales promotions

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Example – You are a dealer for Televisions. Now Sony comes and tells you, you will be given 5% discount if you cross a sale of 100 televisions. Naturally, you will be very motivated because 5% in television sales is huge. Plus selling Sony TV's is easy because it is already a brand. Thus, you divert all potential customers to Sony Televisions so that you can achieve the target.

Similarly, there are other types of trade sales promotions which can be used to motivate the dealer and distributor. More such techniques of sales promotions are discussed below.

As the noise of competitors rises, you will find more and more companies using sales promotions techniques. The advantage of sales promotion is that they are not too expensive for the company when compared with ATL advertising mediums like Television or newspaper. Hence, even small businesses use it quite effectively.

Push pull marketing strategies

Promotional strategies to get your product or service to market can be roughly divided into two separate camps – push and pull.

1. Push strategy

A push promotional strategy involves taking the product directly to the customer via whatever means, ensuring the customer is aware of your brand at the point of purchase.

“Taking the product to the customer”**Examples of push tactics**

- Trade show promotions to encourage retailer demand
- Direct selling to customers in showrooms or face to face
- Negotiation with retailers to stock your product
- Efficient supply chain allowing retailers an efficient supply
- Packaging design to encourage purchase
- Point of sale displays

2. Pull strategy

A pull strategy involves motivating customers to seek out your brand in an active process.

“Getting the customer to come to you”**Examples of pull tactics**

- Advertising and mass media promotion
- Word of mouth referrals
- Customer relationship management
- Sales promotions and discounts

Push strategy explained

The term ‘push strategy’ describes the work a manufacturer of a product needs to perform to get the product to the customer. This may involve setting up distribution channels and persuading middlemen and retailers to stock your product. The push technique can work particularly well for lower value items such as fast moving consumer goods (FMCGs), when customers are standing at the shelf ready to drop an item into their baskets and are ready to make their decision on the spot. This term now broadly encompasses most direct promotional techniques such as encouraging retailers to stock your product, designing point of sale materials or even selling face to face. New businesses often adopt a push strategy for their products in order to generate exposure and a retail channel. Once your brand has been established, this can be integrated with a pull strategy.

Pull strategy explained

‘Pull strategy’ refers to the customer actively seeking out your product and retailers placing orders for stock due to direct consumer demand. A pull strategy requires a highly visible brand which can be developed through mass media advertising or similar tactics. If customers want a product, the retailers will stock it – supply and demand in its purest form, and this is the basis of a pull strategy. Create the demand, and the supply channels will almost look after themselves.

Unit – I

Management Accounting

Introduction

Management accounting can be viewed as Management-oriented Accounting. Basically it is the study of managerial aspect of financial accounting, "accounting in relation to management function". It shows how the accounting function can be re-oriented so as to fit it within the framework of management activity. The primary task of management accounting is, therefore, to redesign the entire accounting system so that it may serve the operational needs of the firm. If furnishes definite accounting information, past, present or future, which may be used as a basis for management action. The financial data are so devised and systematically development that they become a unique tool for management decision.

Definitions of Management Accounting

According to ***Broad and Carmichael***, "Management Accounting covers all those services by which the accounting department can assist the top management and other departments in the formation of policy, control of execution and appreciation of effectiveness."

The Report of the ***Anglo-American Council of Productivity*** (1950) has also given a definition of management accounting, which has been widely accepted. According to it, "Management accounting is the presentation of accounting information in such a way as to assist the management in creation of policy and the day to day operation of an undertaking".

Nature of Management Accounting

The term management accounting is composed of 'management' and 'accounting'. The word 'management' here does not signify only the top management but the entire personnel charged with the authority and responsibility of operating an enterprise. The task of management accounting involves furnishing accounting information to the management, which may base its decisions on it. It is through management accounting that the management gets the tools for an analysis of its administrative action and can lay suitable stress on the possible alternatives in terms of costs, prices and profits, etc. but it should be understood that the accounting information supplied to management is not the sole basis for managerial decisions. Management accounting has no set principles such as the double entry system of bookkeeping. Since management accounting is managerially oriented, its data is selective in nature. It focuses on potential opportunities rather than opportunities lost.

Importance of Management Accounting

The basic function of management accounting is to assist the management in performing its functions effectively. The functions of the management are planning, organizing, directing and controlling. Management accounting helps in the performance of each of these functions in the following ways:

(i) Provides data: Management accounting serves as a vital source of data for management planning. The accounts and documents are a repository of a vast quantity of data about the past progress of the enterprise, which are a must for making forecasts for the future.

(ii) Modifies data: The accounting data required for managerial decisions is properly compiled and classified. For example, purchase figures for different months may be classified to know total purchases made during each period product-wise, supplier-wise and territory-wise.

(iii) Analyses and interprets data: The accounting data is analyzed meaningfully for effective planning and decision-making. For this purpose the data is presented in a comparative form. Ratios are calculated and likely trends are projected.

(iv) Serves as a means of communicating: Management accounting provides a means of communicating management plans upward, downward and outward through the organization. Initially, it means identifying the feasibility and consistency of the various segments of the plan. At later stages it keeps all parties informed about the plans that have been agreed upon and their roles in these plans.

(v) Facilitates control: Management accounting helps in translating given objectives and strategy into specified goals for attainment by a specified time and secures effective accomplishment of these goals in an efficient manner. All this is made possible through

budgetary control and standard costing which is an integral part of management accounting.

(vi)Uses qualitative information: Management accounting does not restrict itself to financial data for helping the management in decision making but also uses such information which may not be capable of being measured in monetary terms. Such information may be collected form special surveys, statistical compilations, engineering records, etc.

Scope of Management Accounting

Management accounting is concerned with presentation of accounting information in the most useful way for the management. Its scope is, therefore, quite vast and includes within its fold almost all aspects of business operations. However, the following areas can rightly be identified as falling within the ambit of management accounting:

(i) Financial Accounting: Management accounting is mainly concerned with the rearrangement of the information provided by financial accounting. Hence, management cannot obtain full control and coordination of operations without a properly designed financial accounting system.

(ii) Cost Accounting: Standard costing, marginal costing, opportunity cost analysis, differential costing and other cost techniques play a useful role in operation and control of the business undertaking.

(iii) Revaluation Accounting: This is concerned with ensuring that capital is maintained intact in real terms and profit is calculated with this fact in mind.

(iv) Budgetary Control: This includes framing of budgets, comparison of actual performance with the budgeted performance, computation of variances, finding of their causes, etc**.**

(v) Inventory Control: It includes control over inventory from the time it is acquired till its final disposal.

(vi) Statistical Methods: Graphs, charts, pictorial presentation, index numbers and other statistical methods make the information more impressive and intelligible.

(vii) Interim Reporting: This includes preparation of monthly, quarterly, half-yearly income statements and the related reports, cash flow and funds flow statements, scrap reports, etc.

(viii) Taxation: This includes computation of income in accordance with the tax laws, filing of returns and making tax payments.

(ix) Office Services: This includes maintenance of proper data processing and other office management services, reporting on best use of mechanical and electronic devices.

(x) Internal Audit: Development of a suitable internal audit system for internal control.

The Management Accountant

Management Accounting provides significant economic and financial data to the management and the Management Accountant is the channel through which this information efficiently and effectively flows to the management. The Management Accountant has a very significant role to perform in the installation, development and functioning of an efficient and effective management information system. He designs the framework of the financial and cost control reports that provide each management level with the most useful data at the most appropriate time. He educates executives in the need for control information and ways of using it. This is because his position is unique with respect to information about the organization. Apart from top management no one in the organization perhaps knows more about the various functions of the organization than him. He is, therefore, sometimes described as the Chief Intelligence Officer of the top management. He gathers information, breaks it down, sifts it out and organizes it into meaningful categories. He separates relevant and irrelevant information and then ranks relevant information in an intelligible form to the management and sometimes also to those who are interested in the information in the information outside the company. He also compares the actual performance with the planned one and reports and interprets the results of operations to all levels of management and to the owners of the business.

Role of Management Accountant

It is the duty of the management accountant to keep all levels of management informed of their real position. He has, therefore, varied functions to perform.

His important functions can be summarized as follows:

(i) Planning: He has to establish, coordinate and administer as an integral part of management, an adequate plan for the control of the operations. Such a plan would include profit planning, programmes of capital investment and financing, sales forecasts, expenses budgets and cost standards.

(ii) Controlling: He has to compare actual performance with operating plans and standards and to report and interpret the results of operations to all levels of management and the owners of the business. This is done through the compilation of appropriate accounting and statistical records and reports.

(iii) Coordinating: He consults all segments of management responsible for policy or action. Such consultation might concern any phase of the operation of the business having to do with attainment of objectives and the effectiveness of the organizational structures and policies.

(iv) Other functions:

- He administers tax policies and procedures.
- He supervises and coordinated the preparation of reports to governmental agencies.
- He ensures fiscal protection for the assets of the business through adequate internal control and

proper insurance coverage.

- He carries out continuous appraisal economic and social forces and the government influences, and interprets their effect on the business.

It should be noted that the functions of a Management Accountant are more of those of a 'staff official'. He, in addition to processing historical data, supplies a good deal of information concerning the future operations in line with the management's needs. Besides serving top management with information concerning the company as a whole, he supplies detailed information to the line officers regarding alternative plans and their profitability, which help them in decision-making. As a matter of fact the Management Accountant should not bother himself regarding the decision taken by the line officials after tendering advice unless he has reasonable grounds to believe that such a decision is going to affect the interests of corporation adversely. In such an event also he should report it to the concerned level of management with tact, firmness combined with politeness

Management Accounting and Financial Accounting

Financial accounting and management accounting are closely interrelated since management accounting is to a large extent rearrangement of the data provided by financial accounting. Moreover, all accounting is financial in the sense that all accounting systems are in monetary terms and management is responsible for the contents of the financial accounting statements. In spite of such a close relationship between the two, there are certain fundamental differences. These differences can be laid down as follows:

(i) Objectives: Financial accounting is designed to supply information in the form of profit and loss account and balance sheet to external parties like shareholders, creditors, banks, investors and Government. Information is supplied periodically and is usually of such type in which management is not much interested. Management Accounting is designed principally for providing accounting information for internal use of the management. Thus, financial accounting is primarily an external reporting process while management accounting is primarily an internal reporting process.

(ii) Analyzing performance: Financial accounting portrays the position of business as a whole. The financial statements like income statement and balance sheet report on overall performance or statues of the business. On the other hand, management accounting directs its attention to the various divisions, departments of the business and reports about the profitability, performance, etc., of each of them. Financial accounting deals with the aggregates and, therefore, cannot

reveal what part of the management action is going wrong and why. Management accounting provides detailed analytical data for these purposes.

(iii) Data used: Financial accounting is concerned with the monetary record of past events. It is a post-mortem analysis of past activity and, therefore, out the date for management action. Management accounting is accounting for future and, therefore, it supplies data both for present and future duly analyzed in detail in the 'management language' so that it becomes a base for management action.

(iv) Monetary measurement: In financial accounting only such economic events find place, which can be described in money. However, the management is equally interested in non-monetary economic events, viz., technical innovations, personnel in the organization, changes in

the value of money, etc. These events affect management's decision and, therefore, management accounting cannot afford to ignore them.

For example, change in the value of money may not find a place in financial accounting on account of "going concern concept". But while affecting an insurance policy on an asset or providing for replacement of an asset, the management will have to take into account this factor.

(v) Periodicity of reporting: The period of reporting is much longer in financial accounting as compared to management accounting. The Income Statement and the Balance Sheet are usually prepared yearly or in some cases half-yearly. Management requires information at frequent intervals and, therefore, financial accounting fails to cater to the needs of the management. In management accounting there is more emphasis on furnishing information quickly and at comparatively short intervals as per the requirements of the management.

(vi) Precision: There is less emphasis on precision in case of management accounting as compared to financial accounting since the information is meant for internal consumption.

(vii) Nature: Financial accounting is more objective while management accounting is more subjective. This is because management accounting is fundamentally based on judgement rather than on measurement.

(viii) Legal compulsion: Financial accounting has more or less become compulsory for every business on account of the legal provisions of one or the other Act. However, a business is free to install or not to install system of management accounting.

The above points of difference between Financial Accounting and Management Accounting prove that Management Accounting has flexible approach as compared to rigid approach in the case of Financial Accounting. In brief, financial accounting simply shows how the business has moved in the past while management accounting shows how the business has to move in the future.

Cost Accounting and Management Accounting

Cost accounting is the process of accounting for costs. It embraces the accounting procedures relating to recording of all income and expenditure and the preparation of periodical statements and reports with the object of ascertaining and controlling costs. It is, thus, the formal mechanism by means of which the costs of products or services are ascertained and controlled. On the other hand, management accounting involves collecting, analyzing, interpreting and presenting all accounting information, which is useful to the management. It is closely associated with management control, which comprises planning, executing, measuring and evaluating the performance of an organization. Thus, management accounting draws heavily on cost data and other information derived from cost accounting.

Today cost accounting is generally indistinguishable from the so-called management accounting or internal accounting because it serves multiple purposes. However, management accounting can be distinguished from cost accounting in one important respect. Management accounting has a wider scope as compared to cost accounting. Cost accounting deals primarily with cost data while management accounting involves the considerations of both cost and revenue.

Management accounting is an all inclusive accounting information system, which covers financial accounting, cost accounting, and all aspects of financial management. But it is not a substitute for other accounting functions. It involves a continuous process of reporting cost, financial and other relevant data in an analytical and informative way to management. We should not be very much concerned with boundaries of cost accounting and management accounting since they are complementary in nature. In the absence of a suitable system of cost accounting, management accountant will not be in a position to have detailed cost information and his function is bound to lose significance. On the other hand, management accountant cannot effectively use the cost data unless it has been reported to him in a meaningful and informative form.

Limitations of Management Accounting

Management accounting, being comparatively a new discipline, suffers from certain limitations, which limit its effectiveness. These limitations are as follows:

1. Limitations of basic records: Management accounting derives its information from financial accounting, cost accounting and other records. The strength and weakness of the management accounting, therefore, depends upon the strength and weakness of these basic records. In other words, their limitations are also the limitations of management accounting.

2. Persistent efforts. The conclusions draws by the management accountant are not executed automatically. He has to convince people at all levels. In other words, he must be an efficient salesman in selling his ideas.

3. Management accounting is only a tool: Management accounting cannot replace the management. Management accountant is only an adviser to the management. The decision regarding implementing his advice is to be taken by the management. There is always a temptation to take an easy course of arriving at decision by intuition rather than going by the advice of the management accountant.

4. Wide scope: Management accounting has a very wide scope incorporating many disciplines. It considers both monetary as well as non-monetary factors. This all brings inexactness and subjectivity in the conclusions obtained through it.

5. Top-heavy structure: The installation of management accounting system requires heavy costs on account of an elaborate organization and numerous rules and regulations. It can, therefore, be adopted only by big concerns.

6. Opposition to change: Management accounting demands a break away from traditional accounting practices. It calls for a rearrangement of the personnel and their activities, which is generally not like by the people involved.

7. Evolutionary stage: Management accounting is still in its initial stage. It has, therefore, the same impediments as a new discipline will have, e.g., fluidity of concepts, raw techniques and imperfect analytical tools.

This all creates doubt about the very utility of management accounting.

Unit – 2

FINANCIAL STATEMENT ANALYSIS

INTRODUCTION

Financial statements are an important source of information for evaluating the performance and prospects of a firm. If properly analyzed and interpreted, financial statements can provide valuable insights into a firm's performance. Analysis of financial statements is of interest to lenders, investors, security analysts, managers, and others. Financial statement analysis may be done for a variety of purposes, which may range from a simple analysis of the short-term liquidity position of the firm to a comprehensive assessment of the strengths and weaknesses of the firm in various areas. It is helpful in assessing corporate excellence, judging creditworthiness, evaluating intrinsic value of equity shares, predicting bankruptcy, and assessing market risk.

FINANCIAL STATEMENTS

Managers, shareholders, creditors and other interested groups seek answers to the following questions about a firm: What is the financial position of firm at a given point of time? What have been the sources and uses of cash over a given period? To answer these questions, the accountant prepares two principal statements, the balance sheet and the profit and loss account.

1. **Balance Sheet**

The balance sheet shows the financial condition of a business at a given point of time. As per the Companies Act, the balance sheet of a company shall be in either the account (horizontal) form or the report (vertical) form. Exhibit 2.1 and 2.2 shows the balance sheet of ABC Limited as on March 31, 2013 cast in the account as well as the report form.

Exhibit 2.1 Account Form

Liabilities	Amount	Assets	Amount
Share capital		Fixed assets	
Reserves and surplus		Investments	
Secured Loans		Current assets, loans & advances	
Unsecured loans		Miscellaneous expenditure & losses	

Current liabilities & Provisions

Exhibit 2.2 Report Form

I Sources of Funds

(1) Shareholders funds

(a) Share capital

(b) Reserves & surplus

(2) Loan funds

(a) Secured loans

(b) Unsecured loans

II Application of Funds

(1) Fixed assets

(2) Investments

(3) Current assets, loans and advances Less: Current liabilities and provisions

Net current assets

(4) Miscellaneous expenditure and losses.

Liabilities: - Liabilities defined very broadly represent what the business entity owes others. The Companies Act classifies them as share capital, reserves and surplus, secured loans, unsecured loans, current liabilities and provisions -

Share Capital: This is divided into two types: equity capital and preference capital. The first represents the contribution of equity shareholders who are the owners to the firm. Equity capital, being risk capital, carries no fixed rate of dividend. Preference capital represents the contribution of preference shareholders and the dividend rate payable on it is fixed.

Reserves and Surplus: Reserves and surplus are profits, which have been retained in the firm. There are two types of reserves: revenue reserves and capital reserves. Revenue reserves represent accumulated retained earning from profits of normal business operations. These are held in various forms: general reserve, investment allowance reserve, capital redemption reserves, dividend equalization reserve, and so on. Capital reserves arise out gains, which are not related to normal business operations. Examples of such gains are the premium on issue of shares or gain on revaluation of assets.

Secured Loans: These are the borrowings of the firm against which specific collateral have been provided. The important components of secured loans are: debentures, loans from financial institutions, and loans from commercial banks.

Unsecured Loans: These are the borrowing of the firm against which no specific security has been provided. The major components of unsecured loans are: fixed deposits, loans and advances from promoters, inter-corporate borrowings, and unsecured loans from banks.

Current liabilities and Provisions: Current liabilities and provisions, as per the classification under the companies Act, consist of the amounts due to the suppliers of goods and services bought on credit, advance payments received, accrued expenses, unclaimed dividend, provisions for taxes, dividends, and so on. So defined, they include current liabilities and provisions as per the classification under the Companies Act plus loans (secured and unsecured) which are repayable within one year from the date of the balance sheet.

Assets: - Broadly speaking, assets represent resources, which are of some value to the firm. They have been acquired at a specific monetary cost by the firm for the conduct of its operations. Assets are classified under the Companies Act as fixed assets, investments, current assets, loans and advances, miscellaneous expenditure and losses.

Fixed Assets: These assets have two characteristics: they are acquired for use over relatively long periods for carrying on the operations of the firm and they are ordinarily not meant for resale. Examples of fixed assets are land, buildings, plant, machinery, patents, and copyrights.

Investments: These are financial securities owned by the firm. Some investments represent long-term commitment of funds (usually these are the equity shares of other firms held for income and control purposes). Other investments are likely to be short term in nature such as holdings of units in mutual fund schemes and may rightly be classified under current assets for managerial purposes.

Current Assets, Loans and Advances: This category consists of cash and other assets, which get converted into cash during the operating cycle of the fir. Current assets are held for a short period of time as against fixed assets, which are held for relatively longer periods. The major components of current assets are: cash, sundry debtors, inventories, loans and advances, and prepaid expenses.

Loans and advances are the amounts loaned to employees, advances given to suppliers and contractors, advance tax paid, and deposits made with governmental and other agencies.

Miscellaneous Expenditures and Losses: This category consists of two items: (i) miscellaneous expenditures and (ii) losses. Miscellaneous expenditures represent certain outlays such as preliminary expenses and developmental expenses, which have not been written off. From the accounting point of view, a loss represents a decrease in owners' equity. Hence, when a loss occurs, the owners' equity should be reduced by that amount. However, as per company law requirements, the share capital (representing owners' equity) cannot be reduced when a loss occurs. So the share capital is kept intact on the left hand side (the liabilities side) of the balance sheet and the loss is shown on the right hand side (the assets side) of the balance sheet.

Profit And Loss Account

The Companies Act has prescribed a standard form for the balance sheet, but none for the profit and loss account. However, the Companies Act does require that the information provided should be adequate to reflect a true and fair picture of the operations of the company for the accounting period. The profit and loss account, like the balance sheet, may be presented in the account form or the report form. Typically, companies employ the report form. The report form statement may be a single-step statement or a multi-step statement. In a single step statement, all revenue items are recorded first, then the expense items are show and finally the net profit is given. While a single step profit and loss account aggregates all revenues and expenses, a multi-step profit and loss account provides disaggregated information. Further, instead of showing only the final profit measure, viz., the profit after tax figure, it presents profit measures at intermediate stages as well.

- Net sales

- Cost of goods sold
- Gross profit
- Operating expenses
- Operating profit
- Non-operating surplus/deficit
- Profit before interest and tax
- Interest
- Profit before tax
- Tax
- Profit after tax.

FINANCIAL STATEMENTS ANALYSIS

Financial Statements Analysis (FSA) refers to the process of the critical examination of the financial information contained in the financial statements in order to understand and make decisions regarding the operations of the firm. The FSA is basically a study of the relationship among various financial facts and figures is given in a set of financial statements. The basic financial statements i.e. the Balance Sheet and the Income Statement, already discussed in the preceding lesson contain a whole lot of historical data. The complex figures as given in these financial statements are dissected/broken up into simple and valuables elements and significant relationships are established between the elements of the same statement or different financial statements. This process of dissection, establishing relationships and interpretation thereof to understand the working and financial position of a firm is called the FSA.

Thus, FSA is the process of establishing and identifying the financial weaknesses and strength of the firm. It is indicative of two aspects of a firm i.e. the profitability and the financial position and it is what is known as the objectives of the FSA.

Types of Financial Analysis

Financial analysis can be classified into different categories depending upon

(1) the Information Required, and (2) the modus operandi of analysis.

1. On the Basis of Information Required: Under this category the financial analysis can be of two types: a) External Analysis; b) Internal Analysis

a. External Analysis: The outsiders to the business carry out this kind of analysis, which includes investors, credit agencies, government agencies and other creditors who have no access to the internal records of the company. In the recent times this analysis has gathered momentum towards better corporate governance and government regulations for more detailed disclosure of information by the companies in their financial statements.

b. Internal Analysis: In contrary to the above this analysis is done by those who have access to the books of accounts and other information related to the business. The analysis is done depending upon the objective to be achieved through this analysis.

2. On the basis of Modus Operandi: In this case too, the financial analysis can be of two types: a) Horizontal Analysis; b) Vertical Analysis

A **Horizontal Analysis:** Under this financial statements for a number of years are reviewed and analyzed. The current year's figures are compared with standard or base year.

B **Vertical Analysis:** Under this type of analysis a study is made of the quantitative relationship of the various items in financial statements on a particular date. For example, the ratios of different items of costs for a particular period may be calculated with the sales for that period. These types of financial analysis are useful in comparing the performance of several companies in the same group, or divisions or departments in the same company.

In addition to above, the FSA for a firm can be undertaken in different ways. There is 'the best' technique of the FSA, which can be applied to all the firms under all the situations. The type of the FSA undertaken depends upon the person doing the FSA and the purpose of which the FSA has been undertaken. Different person/parties may undertake the FSA for different purposes. The persons/parties, who are usually interested in the FSA, may be the shareholders, the creditors, the financial institutions, the investors and the management itself. The FSA can be classified into different categories as follows:

a) Internal and External FSA   b) Dynamic and Static FSA

a) Internal and External FSA: The FSA is said to be internal when it is done by a person who has access to the books of the account and other related information of the firm. This type of FSA is conducted for measuring the operational and managerial efficiency at different hierarchy levels of the firm. This type of analysis is quite comprehensive and reliable. In order to undertake internal FSA, either an employee of the same firm or an outside agency may be entrusted the responsibility. External FSA, on the other hand, is one, which is conducted by an outsider without having any access to the basic accounting record of the firm. These outsiders may be the creditors, the investors, the shareholders, the credit rating agencies etc. The external FSA is dependent on the published financial data of the firm and consequently can serve only limited purpose.

b) Dynamic and Static FSA: The FSA is said to be dynamic if it covers a period of several years. Financial data/information for different years is incorporated in the FSA to assess the progress of the firm. This type of FSA is also called the horizontal analysis. The dynamic FSA is useful for long-term trend analysis and planning. In dynamic FSA, the figures/data for a year are placed and compared with the figures/data for several other years and changes from 1 year to another are identified. Since, the dynamic analysis covers a period of more than 1 year (may be up to 5 or 10 years), is given a considerable insight into areas of financial weaknesses and strength of the firm. On the other hand, the static FSA covers a period of 1 year only and the analysis is made on the basis of only one set of financial statements.

So, it is study in terms of information at a particular date only. It is also called vertical FSA. Impliedly, the static FSA fails to incorporate the periodic changes and therefore, may not be very conducive to a proper understanding of the financial position of the firm. It may be noted that both the dynamic and static FSA should be conducted simultaneously as both are indispensable for understanding the profitability and financial position of the firm.

On the basis of the above discussion, it can be said that FSA investigative and thought provoking process in nature. The basic objective of FSA is financial planning and forecasting on the basis of meaningful interpretation of the financial information. It is forward looking exercise. Since, decisions are going to be taken on the basis of the FSA, the analyst must be careful, precise, analytical, objective and intelligent enough to undertake the FSA in a systematic way.

TECHNIQUES/TOOLS OF THE FSA

As already discussed, that the FSA can be undertaken by different persons and for different purposes, therefore, the methodology adopted for the FSA may be varying from the one situation to another. However, the following are some of the common techniques of the FSA:

a) Comparative financial statements. (b) Common-size financial statements, (c) Trend percentages analysis, and (d) Ration Analysis. The last techniques i.e. the ration analysis is the most common, comprehensive and powerful tool of the FSA. For the sake of proper understanding, all these techniques have been discussed in detail as follows:

COMPARATIVE FINANCIAL STATEMENTS (CFS)

In CFS, two or more BS and/or the IS of a firm are presented simultaneously in columnar form. The financial data for two or more years are placed and presented in adjacent columns and thereby the financial data is provided a times perspective in order to facilitate periodic comparison. In CFS, the BS and the IS for number of years are presented in condensed form for year-to-year comparison and to exhibit the magnitude and direction of changes.

The preparation of the CFS is based on the premise that a statement covering a period of a number of years is more meaningful and significant than for a single year only, and that the financial statements for one period represent only 1 phase of the long and continuous history of the firm. Nowadays, most of the published Annual Reports of the companies provide important statistical information about the company in condensed from for the last so many years. The presentation of such data enhances the usefulness of these reports and brings out more clearly the nature and trends of changes affecting the profitability and financial position of the firm.

So, the CFS helps a financial analyst in horizontal analysis of the firm and in establishing operating and positional trend of the firm. The CFS may be prepared to show the absolute amount of different items in monetary terms, the amount of periodic changes in monetary terms and the percentages of periodic changes to reveal the proportionate changes. The CFS can be prepared for both the BS and IS.

Comparative Income Statement (CIS): A CIS shows the figures of different items of the ISs of the firm in absolute terms, the absolute changes from one period to another and if desired, the changes in percentage form. The CIS is helpful in deriving meaningful conclusions regarding changes in sales volume, cost of goods sold, different expense items etc. From the CIS a financial analyst can quickly ascertain whether sales are increasing or decreasing and by how much amount or by how much percentage. Similarly, analysis can be made for other items also.

Comparative Balance Sheet (CBS): The CBS shows the different assets and liabilities of the firm on different dates to make comparisons of absolute balances and also of changes if any, from one date to another. The CBS may be helpful in analyzing and evaluating the financial position of the firm over a period of number of years. The preparation of CFS can be explained with the help of Example 2.1.

Example 2.1: Following are the IS and BS of ABC & Co. for the year 2003 and 2004, Prepare the CBS and CIS for these two years.

Income Statements for the year 2003 and 2004

(Figures in Rs.)

To Cost of good sold	300000	375000	By Net Sales	400000	500000
To General Expenses	10000	10000			
To Selling Expenses	15000	20000			
To Net Profit	75000	95000			
	400000	500000		400000	500000

Balance Sheets as on December 31

(Figures in Rs.)

Liabilities	**2003**	**2004**	**Assets**	**2003**	**2004**
Capital	350000	350000	Land	50000	50000
Reserves	100000	122500	Building	150000	135000
Secured Loans	50000	75000	Plant	150000	135000
Creditors	100000	137000	Furniture	50000	70000
Outstanding Exp	50000	75000	Cash	50000	70000
			Debtors	100000	150000
			Stores	100000	150000
	650000	760000		650000	760000

Solution:

COMPARATIVE INCOME STATEMENT

FOR THE YEARS ENDING 2003 AND 2004

(Figures in Rs.)

Liabilities	**2003**	**2004**	**Change in 2004**	**% change in 2004**
Net Sales	400000	500000	100000	+ 25

Less COGS	300000	375000	75000	+ 25
Gross Profit (1)	100000	125000	25000	+ 25
Less General	10000	10000	---------	--------

Selling Expenses	15000	200005000	+ 33.3
Total Expenses (2)	25000	300005000	+ 20
Net Profit (1-2)	75000	9500020000	+ 26.7

COMPARATIVE BALANCE SHEET AS ON DEC. 31, 2004

(Figures in Rs.)

Liabilities	2003	2004	Change in 2004	% change in 2004
Land	50000	50000	----	----
Building	150000	135000	- 15000	- 10
Plant	150000	135000	-15000	- 10
Furniture	50000_	70000 _	20000	+ 40
Total F. assets (1)	400000	390000	-10000	- 2.5
Cash	50000	70000	20000	40
Debtors	100000	150000	50000	50
Stock	100000	150000	50000	50
Total C. Assets (2)	250000	370000	120000	48
Creditors	100000	137500	37500	37.5
O/s Expenses	50000_	75000_	25000	50
Total C. Liabilities (3)	150000	212500	62500	41.7
Working Capital	100000	157500	57500	57.5
(2 - 3)				
Capital	350000	350000	-------	------
Reserves	100000	122500	22500	22.5
Proprietor's Fund (4)	450000	472500	22500	5
Secured Loans (5)	50000	75000	25000	50

Capital Employed	500000	547500	47500	9.5
(4+5)				
Total Assets (1+2)	650000	760000	110000	16.9
Capital + Total Liabilities				
(3+4+5)	650000	760000	110000	16.9

Interpretation: On the basis of CIS it can be said that Gross Profit for the year 2004 has increased by 25% over the profit for the year 2003. The Net Sales during the same period has increased by 25%, which was coupled with increase in the cost of goods sold which also increased by same 25%. This means that Input/ Output ratio or the production efficiency level has been maintained during 2004. the same increase of 25% in Net Sales and the Cost of goods sold has resulted in increase in Gross Profit by 25%. The increase in Net Profit is more pronounced i.e. by 26.7%. The reason for a higher increase in Net Profit is the comparatively less increase in total expenses (only 20%). The General Expenses during 2003 and 2004 were same but the increase in Selling Expenses by 33 1/3% has resulted increase of total expenses by 20%. The CBS also reveals many facts about the composition of assets and the financial structure of the firm. The Fixed Assets have decreased over the period by 2.5%, though this decrease has primarily resulted by the amount of depreciation @ 10% on Buildings and Plant. However, the Current Assets have increased by 48%, this increase of 48% is too much in view of increase in Net Sales by 25% only. Moreover, the Current Liabilities have increased by 41.7%. Since the increase in Current Assets is more than increase is Current Liabilities, therefore the Net Working Capital has increased by 57.5%. The clearly indicates that the Working Capital of the firm is not properly managed. Had the increase in current assets restricted to 25% or the increase in current liabilities was also achieved at 48% or so, then the situation would not have been so alarming. However, the decrease in fixed assets has been offset by increase in Net Working Capital and consequently the total assets have increased by 16.9%. The firm has not raised any capital during the period and the increase in proprietor's funds has resulted because of increase in retained profits by Rs. 22,500. The Secured Loans have also increased by 50%. The funds provided by the retained earnings and the secured loans seem to have been utilized in financing the current assets. This has, on one hand increased the short term paying capacity of the firm and on the other hand, will affect the earning capacity of the firm as the current assets are less or non productive. So, the CFS explains about the changes in different items of the financial statements. However, despite this revelation, the CFS fails to highlight the component changes in relation to total assets or total liabilities. The CFS does not throw light on the variations in each asset as a percentage of total assets for a particular period or changes in different liabilities in relation to total liabilities for that period etc. This drawback of CFS is taken care of by the

Common Size Statement.

COMMON SIZE STATEMENT (CSS)

The CSS represents the relationship of different items of a financial statement with some Common item by expressing each item as a percentage of the Common item. In Common size Balance Sheet, each item of the Balance Sheet is stated as a percentage of the total of the Balance Sheet. Similarly in Common size Income Statement, each item is stated as percentage of the Net Sales. The percentages for different items are computed by dividing the absolute amount of that item by the Common base (i.e. the Balance Sheet Total or the Net Sales as the case may be) and then multiplying by 100. The percentage so calculated can be easily compared with the corresponding percentages in some other period. Thus, the CSS is useful not only in intra-firm comparisons over a series of different year but also in making inter-firm comparisons for the same year or for several years. The procedure and the technique of preparation of the CSS can be explained with the help of Example 2.2.

Example 2.2. With the use of data given in the Example 2.1 prepare the Common Size BS and Common Size IS for the years 2003 & 2004.

Solution:

COMMON SIZE BALANCE SHEET

Amount (Rs.) **%**

Liabilities	**2003**	**2004**	**2003**	**2004**
Land	50000	50000	7.70	6.59
Building	150000	135000	23.07	17.76
Plant	150000	135000	23.07	17.76
Furniture	50000	70000	7.70	9.21
Total Fixed Assets (1)	400000	390000	61.54	51.32
Cash	50000	70000	7.70	9.20
Debtors	100000	150000	15.38	19.74
Stock	100000	150000	15.38	19.74
Total C. Assets (2)	250000	370000	38.46	48.68
Total Assets (1+2)	650000	760000	100	100
Capital	350000	350000	53.85	46.05
Reserves	100000	122500	15.38	16.12
Proprietor's Fund (3)	450000	472500	69.23	62.17
Secured Loan	50000	75000	7.70	9.87

Creditor	100000	137500	15.37	18.09
O/s Expenses	50000	75000	7.70	9.87
Total Liabilities (4)	200000	287500	30.77	37.83
Total Capital + Liabilities (3+4)	650000	760000	100	100

Interpretation: The Common size BS and the Common Size IS reveal that proportion of fixed assets out of total assets has reduced from 61.54% to 51.32% whereas the proportion of reliance of the firm on the current assets. Similarly, out the total liabilities the proportion of the proprietor's funds has reduced from 69.23% to 62.17% and the proportion of external liabilities has increased from 30.77% to 37.83%. Since, no new capital has been issued and the other liabilities have increased, the proportion of capital in the total financing of the firm has gone down from 53.85% to 46.05%.

TREND PERCENTAGE ANALYSIS (TPA)

The TPA is a technique of studying several financial statements over a series of years. In TPA, the trend percentages are calculated for each item by taking the figure of that item for some base year as 100. So, the trend percentage is the percentage relationship, which each item of different years bears to the same item in the base year. Any year may be taken as the base year. Any year may be taken as the base year, but generally the starting/initial year is taken as the base year. So, each item for base year is taken as 100 and then the same item for other years is expressed as a percentage of the base year.

TPA is an important tool of historical analysis. It can be of immense help in making a comparative analysis over a series of years. The TPA provides brevity and easy readability to several financial statements as the percentages figures disclose more than the absolute figures. However, some precautions must be taken while using the TPA as a technique of the AFS as follows:

There should not be a significant and material change in accounting policies over the years. This consistency is necessary to ensure meaningful comparability.

- Proper care must be taken while selecting the base year. It must be a normal and a representative year. Generally the initial year is taken as base year, but intervening year can also be taken as the base year, if the initial year is not found to be normal year.

- The trend percentages should be analyzed vis-à-vis the absolute figure to avoid any misleading conclusions.

- If possible, the figures for different year should be adjusted for variations in price level also. For example, increase in Net Sales by 30% (from 100 in 2001 to 130 in 2004) over 3 years might have resulted primarily because of increase in selling price and not because of increase in volume.

Quite often, it may be difficult to interpret the increase or decrease in any item (in absolute terms or in percentages terms) as a desirable change or an undesirable change.

RATIO ANALYSIS

Ratio analysis is one of the oldest methods of financial statements analysis. It was developed by banks and other lenders to help them chose amongst competing companies asking for their credit. Two sets of financial statements can be difficult to compare. The effect of time, of being in different industries and having different styles of conducting business can make it almost impossible to come up with a conclusion as to which company is a better investment. Ratio analysis helps creditors solve these issues.

Nature of Financial Ratios?

Shortcut: Financial ratios provide a sort of heuristic or thumb rule that investors can apply to understand the true financial position of a company. There are recommended values that specific ratios must fall within. Whereas in other cases, the values for comparison are derived from other companies or the same companies own previous records. However, instead of undertaking a complete tedious analysis, financial ratios helps investors shortlist companies that meet their criteria.

Sneak-Peek: Investors have limited data to make their decisions with. They do not know what the state of affairs of the company truly is. The financial statements provide the window for them to look at the internal operations of the company. Financial ratios make financial analysis simpler. They also help investors compare the relationships between various income statement and balance sheet items, providing them with a sneak peek of what truly is happening behind the scenes in the company.

Connecting the Dots: Over the years investors have realized that financial ratios have incredible power in revealing the true state of affairs of a company. Analyses like the DuPont Analysis have brought to the forefront the inter-relationship between ratios and how they help a company become more profitable.

They fall into many categories and if variations are included there are hundreds of types of ratios that are common in practice. However, all the ratios are not used by everyone on a regular basis. There are some ratios which are more important to some user groups than they are to other user groups. This article explains why this is the case:

Management: Turnover and Operating Performance Ratios

The management of the company may not be so concerned with the results. They are usually more interested in the cause. This is because while other classes of stakeholders do not have control over the working of the firm i.e. the cause, the management does. All the other stakeholders question the management at the annual general meeting. Hence, management tries to get as much insight into the ratios as possible. They create operating performance ratios and compare it to their previous performance and to the performance of others to learn from the past as well as to be able to give satisfactory answers to the investors.

Shareholders: Profitability

Shareholders, for obvious reasons, are most concerned about profitability. Their investments are at risk and they expect to gain the maximum. Investors scrutinize profitability numbers and pounce upon the slightest signs of mismanagement. For the shareholders, the profitability ratios are the beginning point. They then follow the trail the ratios leave. However over the past two decades the focus has been steadily shifting towards cash flow ratios.

Debt holders and Suppliers: Cash Flow and Liquidity

Debt holders and suppliers are concerned whether they will be paid the amount promised to them at the date that was promised to them. It is for this reason that they are very concerned about the liquidity of the firm. Slightest signs of liquidity issues are met with supply cutbacks from suppliers.

Credit Rating Agencies: Solvency

While debt holders are suppliers are concerned about short term liquidity and cash flow, credit rating agencies go a step ahead. They use solvency ratios to rigorously analyze whether the company will be able to make good its obligations in the long run.

Ratio analysis, without a doubt, is amongst the most powerful tools of financial analysis. Any investor, who wants to be more efficient at their job, must devote more time towards understanding ratios and ratio analysis. However, this does not mean that it is free of limitations.

ADVANTAGES OF RATIO ANALYSIS

Ratio analysis is necessary to establish the relationship between two accounting figures to highlight the significant information to the management or users who can analyze the business situation and to monitor their performance in a meaningful way. The following are the advantages of ratio analysis:

1. It facilitates the accounting information to be summarized and simplified in a required form.
2. It highlights the inter-relationship between the facts and figures of various segments of business.
3. Ratio analysis helps to remove all type of wastages and inefficiencies.
4. It provides necessary information to the management to take prompt decision relating to business.
5. It helps to the management for effectively discharge its functions such as planning, organizing, controlling, directing and forecasting.
6. Ratio analysis reveals profitable and unprofitable activities. Thus, the management is able to concentrate on unprofitable activities and consider to improve the efficiency.
7. Ratio analysis is used as a measuring rod for effective control of performance of business activities.
8. Ratios are an effective means of communication and informing about financial soundness made by the business concern to the proprietors, investors, creditors and other parties.
9. Ratio analysis is an effective tool which is used for measuring the operating results of the enterprises.
10. It facilitates control over the operation as well as resources of the business.
11. Effective co-operation can be achieved through ratio analysis.
12. Ratio analysis provides all assistance to the management to fix responsibilities.
13. Ratio analysis helps to determine the performance of liquidity, profitability and solvency position of the business concern

LIMITATIONS OF RATIO ANALYSIS

1) Misleading Financial Statements - The first and foremost threat to ratio analysis is deliberate misleading statements issued by the management. The management of most companies is aware that investors look at certain numbers like sales, earnings, cash flow etc very seriously. Other numbers on the financial statements do not get such attention. They therefore manipulate the numbers within the legal framework to make important metrics look good. This is a common practice amongst publically listed companies and is called “Window Dressing”. Investors need to be aware of such window dressing and must be careful in calculating and interpreting ratios based on these numbers.

2) **Incomparability -** Comparison is the crux of ratio analysis. Once ratios have been calculated, they need to be compared with other companies or over time. However, many times companies have accounting policies that do not match with each other. This makes it impossible to have any meaningful ratio analysis. Regulators all over the world are striving to make financial statements standardized. However in many cases, companies can still choose accounting policies which will make their statements incomparable.

3) **Qualitative Factors -** Comparison over time is another important technique used in ratio analysis. It is called horizontal analysis. However, many times comparison over time is meaningless because of inflation. Two companies may be using the same machine with the same efficiency but one will have a better ratio because it bought the machine earlier at a low price. Also, since the machine was purchased earlier, it may be closer to impairment. But the ratio does not reflect this.

4) **Subjective Interpretation -** Financial ratios are established "thumb of rules" about the way a business should operate. However some of these rules of thumb have become obsolete. Therefore when companies come with a new kind of business model, ratios show that the company is not a good investment. In reality the company is just "unconventional". Many may even call these companies innovative. Ratio analysis of such companies does not provide meaningful information. Investors must look further to make their decisions.

CLASSIFICATION OF RATIO ANALYSIS

Accounting Ratios are classified on the basis of the different parties interested in making use of the ratios. A very large number of accounting ratios are used for the purpose of determining the financial position of a concern for different purposes. Ratios may be broadly classified in to:

(1) Classification of Ratios on the basis of Balance Sheet.

(2) Classification of Ratios on the basis of Profit and Loss Account.

(3) Classification of Ratios on basis of Mixed Statement (Balance Sheet & Profit & Loss A/c) This classification further grouped in to:

I. Liquidity Ratios

II. Profitability Ratios

III. Turnover Ratios

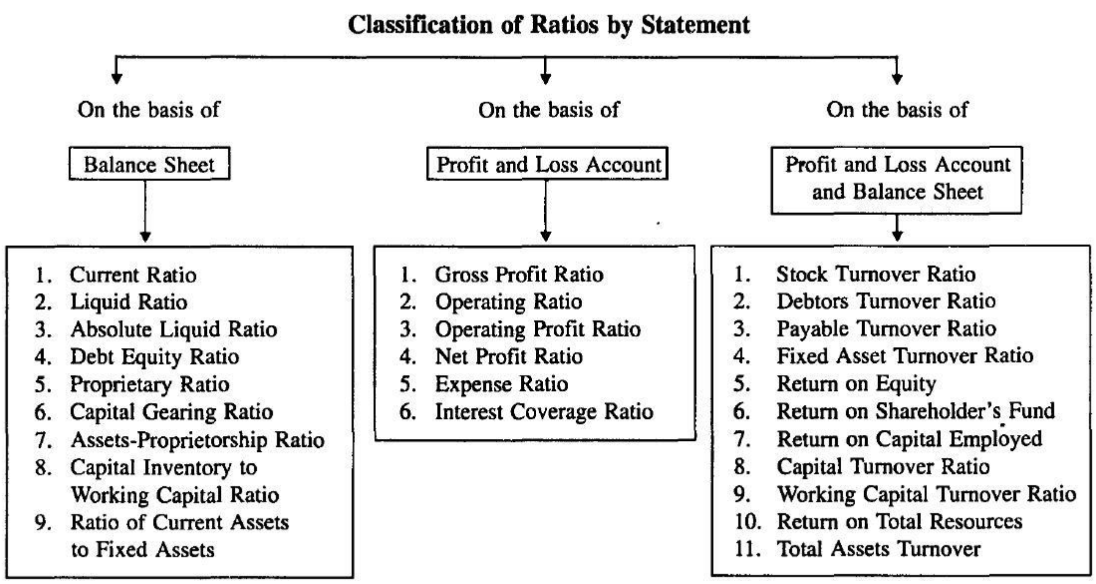
IV. Solvency Ratios

IV. Over all Profitability Ratios

1. Classification of Ratios on the basis of Balance Sheet: Balance sheet ratios which establish the relationship between two balance sheet items. For example- Current Ratio, Fixed Asset Ratio, Capital Gearing Ratio and Liquidity Ratio etc.

2. Classification on the basis of Income Statements: These ratios deal with the relationship between two items or two group of items of the income statement or profit and loss account. For example- Gross Profit Ratio, Operating Ratio, Operating Profit Ratio, and Net Profit Ratio etc.

3. Classification on the basis of Mixed Statements: These ratios also known as Composite or Mixed Ratios or Inter Statement Ratios. The inter statement ratios which deal with relationship between the item of profit and loss account and item of balance sheet. For example, Return on Investment Ratio, Net Profit to Total Asset Ratio, Creditor's Turnover Ratio, Earning Per Share Ratio and Price Earning Ratio etc.



I. LIQUIDITY RATIOS

Liquidity Ratios are also termed as Short-Term Solvency Ratios. The term liquidity means the extent of quick convertibility of assets in to money for paying obligation of short-term nature. Accordingly, liquidity ratios are useful in obtaining an indication of a firm's ability to meet its current liabilities, but it does not reveal how effectively the cash resources can be managed. To measure the liquidity of a firm, the following ratios are commonly used:

(1) Current Ratio.

(2) Quick Ratio (or) Acid Test or Liquid Ratio.

(3) Absolute Liquid Ratio (or) Cash Position Ratio.

(1) Current Ratio –

Current Ratio establishes the relationship between current Assets and current Liabilities. It attempts to measure the ability of a firm to meet its current obligations. In order to compute this ratio, the following formula is used:

Current Ratio = Current Assets

Current Liabilities

The two basic components of this ratio are current assets and current liabilities. Current asset normally means assets which can be easily converted in to cash within a year's time. On the other hand, current liabilities represent those liabilities which are payable within a year.

Interpretation of Current Ratio: The ideal current ratio is 2: 1. It indicates that current assets double the current liabilities are considered to be satisfactory.

Illustration: 1

The following information relates to Mishra & Co. for the year 2003, calculate current ratio:

Current Assets	Rs. 5,00,000
Current Liabilities	Rs. 2,00,000

Solution:

Current Ratio = Current Assets

Current Liabilities

= 5,00,000 = 2.5 (or) 2.5 :1

2,00,000

The current ratio of 2.5 means that current assets are 2.5 times of current liabilities.

(2) Quick Ratio or Acid Test or Liquid Ratio -

Quick Ratio also termed as Acid Test or Liquid Ratio. It is supplementary to the current ratio. The acid test ratio is a more severe and stringent test of a firm's ability to pay its short-term obligations 'as and when they become due. Quick Ratio establishes the relationship between the quick assets and current liabilities. In order to compute this ratio, the below presented formula is used:

Liquid Assets = (Current Assets - Stock and Prepaid Expenses) Liquid Ratio = Quick Assets/ Current Liabilities

Quick Ratio can be calculated by two basic components of quick assets and current liabilities. Quick Assets = Current Assets - (Inventories + Prepaid expenses)

Current liabilities represent those liabilities which are payable within a year.

The ideal Quick Ratio of 1: 1 is considered to be satisfactory. High Acid Test Ratio is an indication that the firm has relatively better position to meet its current obligation in time. On the other hand, a low quick ratio exhibiting that the firm's liquidity position is not good.

(3) Absolute Liquid Ratio

Absolute Liquid Ratio is also called as Cash Position Ratio or Over Due Liability Ratio. This ratio established the relationship between the absolute liquid assets and current liabilities. Absolute Liquid Assets include cash in hand, cash at bank, and marketable securities or temporary investments. The optimum value for this ratio should be one, i.e., 1: 2. It indicates that 50% worth absolute liquid assets are considered adequate to pay the 100% worth current liabilities in time. If the ratio is relatively lower than one, it represents that the company's day-to-day cash management is poor. If the ratio is considerably more than one, the absolute liquid ratio represents enough funds in the form of cash to meet its short-term obligations in time. The Absolute Liquid Ratio can be calculated by dividing the total of the Absolute Liquid Assets by Total Current Liabilities. Thus,

Absolute Liquid Ratio = Absolute Liquid Assets

Current Liabilities

Illustration: 6

Given:

Current Ratio = 2.6

Liquid Ratio = 1.4

Working Capital = Rs. 1,10,000

Calculate: (I) Current Assets (2) Current Liabilities (3) Liquid Assets and (4) Stock.

Solution:

Calculation of current assets and current liabilities:

Working Capital = Current Assets - Current Liabilities

Current Ratio = Current Assets: Current Liabilities (or) = 2.6:1

Current Assets = 2.6 Current Liabilities

Working Capital = Current Assets - Current Liabilities

= 2.6 CL – CL = 1.6CL

Thus, 1.6 CL = 1,10,000

CL = 1,10,000/1.6 = **Rs. 68,750**

CA = 2.6*68,750 = **Rs. 1,78,750**

(3) Calculation of Liquid Assets:

Liquid Ratio (Given) = 1.4

Liquid Ratio = Liquid Assets/ Current Liabilities

Thus, liquid Assets = 68,750*1.4 =**Rs. 96,250**

(4) Calculation of Stock:

Liquid Assets = Current Assets - (Stock + Prepaid Expenses)

Stock = Current Assets - Liquid Assets

= Rs. 1,78.750 - Rs. 96,250

= **Rs.82,500**

II. PROFITABILITY RATIOS

The term profitability means the profit earning capacity of any business activity. Thus, profit earning may be judged on the volume of profit margin of any activity and is calculated by subtracting costs from the total revenue accruing to a firm during a particular period. Profitability Ratio is used to measure the overall efficiency or performance of a business. Generally, a large number of ratios can also be used for determining the profitability as the same is related to sales or investments.

The following important profitability ratios are discussed below:

1. Gross Profit Ratio.
2. Operating Ratio.
3. Operating Profit Ratio.
4. Net Profit Ratio.
5. Return on Investment Ratio.
6. Return on Capital Employed Ratio.
7. Earning Per Share Ratio.

8. Dividend Payout Ratio.

9. Dividend Yield Ratio. lO. Price Earning Ratio.

11. Net Profit to Net Worth Ratio.

(1) Gross Profit Ratio

Gross Profit Ratio established the relationship between gross profit and net sales. This ratio is calculated by dividing the Gross Profit by Sales. It is usually indicated as percentage.

Gross Profit Ratio = Gross Profit * 100

Net Sales

Gross Profit = Sales - Cost of Goods Sold

Net Sales = Gross Sales - Sales Return (or) Return Inwards

Higher Gross Profit Ratio is an indication that the firm has higher profitability. It also reflects the effective standard of performance of firm's business.

(2) Operating Ratio

Operating Ratio is calculated to measure the relationship between total operating expenses and sales. The total operating expenses is the sum total of cost of goods sold, office and administrative expenses and selling and distribution expenses. In other words, this ratio indicates a firm's ability to cover total operating expenses. In order to compute this ratio, the

following formula is used:

Operating Ratio = Operating Cost x 100

Net Sales

Operating Cost = Cost of goods sold + Administrative Exp + Selling and Distribution Exp Net Sales = Sales - Sales Return (or) Return Inwards.

(3) **Operating Profit Ratio**

Operating Profit Ratio indicates the operational efficiency of the firm and is a measure of the firm's ability to cover the total operating expenses. Operating Profit Ratio can be calculated as :

Operating Profit Ratio = Operating Profit_ x 100

Net Sales

Operating Profit = Net Sales - Operating Cost

(or)

= Net Sales - (Cost of Goods Sold + Office & Admin. Exp. + Selling & Distribution Exp.) (or)

= Gross Profit - Operating Expenses

(or)

= Net Profit + Non-Operating Expenses - Non-Operating Income. Net Sales = Sales - Sales Return (or) Return Inwards

(4) Net Profit Ratio

Net Profit Ratio is also termed as Sales Margin Ratio (or) Profit Margin Ratio (or) Net Profit to Sales Ratio. This ratio reveals the firm's overall efficiency in operating the business. Net profit Ratio is used to measure the relationship between net profit (either before or after taxes) and sales. This ratio can be calculated by the following formula :

Net Profit Ratio = <u>Net Profit After Tax</u> * 100 Net Sales

Net profit includes non-operating incomes and profits. Non-Operating Incomes such as dividend received, interest on investment, profit on sales of fixed assets, commission received, discount received etc. Profit or Sales Margin indicates margin available after deduction cost of production, other operating expenses, and income tax from the sales revenue. Higher Net Profit Ratio indicates the standard performance of the business concern.

Advantages

(1) This is the best measure of profitability and liquidity.

(2) It helps to measure overall operational efficiency of the business concern.

(3) It facilitates to make or buy decisions.

(4) It helps to determine the managerial efficiency to use a firm's resources to generate income on its invested capital.

(5) Net profit Ratio is very much useful as a tool of investment evaluation.

(5) Return on Investment Ratio (ROI)

This ratio measures a return on the owner's or shareholders' investment. This ratio establishes the relationship between net profit after interest and taxes and the owner's investment. Usually this is calculated in percentage. This ratio, thus. can be calculated as :

Return on Investment Ratio = Net Profit (after interest and tax) x lOO Shareholders' Fund (or) Investments

Shareholder's Investments = Equity Share Capital + Preference Share Capital + Reserves and Surplus - Accumulated Losses

Net Profit = Net Profit - Interest and Taxes

(6) Return on Capital Employed Ratio

Return on Capital Employed Ratio measures a relationship between profit and capital employed. This ratio is also called as Return on Investment Ratio. The term return means Profits or Net Profits. The term Capital Employed refers to total investments made in the business. The concept of capital employed can be considered further into the following ways:

(a) Gross Capital Employed

(b) Net Capital Employed

(c) Average Capital Employed

(d) Proprietor's Net Capital Employed

(a) Gross Capital Employed = Fixed Assets + Current Assets

(b) Net Capital Employed = Total Assets - Current Liabilities

(c) Average Capital Employed = Opening Capital Employed + Closing Capital Employed

2

OR

Average Capital Employed = Net Capital Employed + 1/2 of Profit after Tax

(d) Proprietor's Net Capital Employed = Fixed Assets + Current Assets - Outside Liabilities (both long-term and short-term)

In order to compute this ratio, the below presented formulas are used:

(1) Return on Capital Employed = _Net Profit after Taxes_ x 100 Gross Capital Employed

(2) Return on Capital Employed = Net Profit after Taxes before Interest * 100 Gross Capital Employed

(3) Return on Capital Employed = Net Profit after Taxes Before Interest____ * 100 Average Capital Employed or Net Capital Employed

(7) Earning Per Share Ratio

Earning Per Share Ratio (EPS) measures the earning capacity of the concern from the owner's point of view and it is helpful in determining the price of the equity share in the market place. Earning Per Share Ratio can be calculated as:

Earning Per Share Ratio = Net Profit after Tax and Preference Dividend No. of Equity Shares

III. TURNOVER RATIOS

Turnover Ratios may be also termed as Efficiency Ratios or Performance Ratios or Activity Ratios. Turnover Ratios highlight the different aspect of financial statement to satisfy the requirements of different parties interested in the business. It also indicates the effectiveness with which different assets are vitalized in a business. Turnover means the number of times assets are converted or turned over into sales. Depending upon the purpose, the following activities or turnover ratios can be calculated:

1. Inventory Ratio or Stock Turnover Ratio (Stock Velocity)
2. Debtor's Turnover Ratio or Receivable Turnover Ratio (Debtor's Velocity) 2 A. Debtor's Collection Period Ratio
3. Creditor's Turnover Ratio or Payable Turnover Ratio (Creditor's Velocity) 3 A. Debt Payment Period Ratio
4. Working Capital Turnover Ratio
5. Fixed Assets Turnover Ratio
6. Capital Turnover Ratio.

(1) Stock Turnover Ratio

This ratio is also called as Inventory Ratio or Stock Velocity Ratio. Inventory means stock of raw materials, working in progress and finished goods. This ratio is used to measure whether the investment in stock in trade is effectively utilized or not. It reveals the relationship between sales and cost of goods sold or average inventory at cost price or average inventory at selling price. Stock Turnover Ratio indicates the number of times the stock has been turned over in business during a particular period. While using this ratio, care must be taken regarding season and condition, price trend, supply condition etc. In order to compute this ratio, the following formulae are used:

Stock Turnover Ratio = Cost of Goods Sold

Average Inventory at Cost

Cost of Goods Sold = Opening Stock + Purchases + Direct Expenses - Closing Stock (or)

= Total Cost of Production + Opening Stock of Finished Goods – C/Stock of Finished Goods Total Cost of Production = Cost of Raw Material Consumed + Wages + Factory Cost

(or)

= Sales - Gross Profit

Average Stock = Opening Stock + Closing Stock

2

Stock Turnover Ratio = Net Sales

Average Inventory

(2) **Debtor's Turnover Ratio**

Debtor's Turnover Ratio is also termed as Receivable Turnover Ratio or Debtor's Velocity. Receivables and Debtors represent the uncollected portion of credit sales. Debtor's Velocity indicates the number of times the receivables are turned over in business during a particular period. In other words, it represents how quickly the debtors are converted into cash. It is used to measure the liquidity position of a concern. This ratio establishes the relationship between receivables and sales. Two kinds of ratios can be used to judge a firm's liquidity position on the basis of efficiency of credit collection and credit policy.

They are (A) Debtor's Turnover Ratio and (B) Debt Collection Period. These ratios may be computed as:

(1) Debtor's Turnover Ratio = Net Credit Sales

Accounts Receivable

Account Receivables = Sundry Debtors or Trade Debtors + Bills Receivable Average Accounts Receivable = Opening Receivable + Closing Receivable

2

Net Credit Sales = Total Sales - (Cash Sales + Sales Return)

It is to be noted that opening and closing receivable and credit sales are not available, the ratio may be calculated by taking total sales and account receivables.

(2) (A) Debt Collection Period Ratio

This ratio indicates the efficiency of the debt collection period and the extent to which the debt have been converted into cash. This ratio is complementary to the Debtor Turnover Ratio. It is very helpful to the management because it represents the average debt collection period. The ratio can be calculated as follows:

(a) Debt Collection Period Ratio = Months (or) Days in a year Debtor's Turnover

(3) **Creditor's Turnover Ratio**

Creditor's Turnover Ratio is also called as Payable Turnover Ratio or Creditor's Velocity. The Term Accounts Payable or Trade Creditors include sundry creditors and bills payable. This ratio establishes the relationship between the net credit purchases and the average trade creditors. Creditor's velocity ratio indicates the number of times with which the payment is made to the supplier in respect of credit purchases. Two kinds of ratios can be used for measuring the efficiency of payable of a business concern relating to credit purchases. They are: (1) Creditor's Turnover Ratio (2) Creditor's Payment Period or Average Payment Period. The ratios can be calculated by the following formulas:

(1) Creditor's Turnover Ratio = Net Credit Purchases

Average Accounts Payable

Net Credit Purchases = Total Purchases - Cash Purchases

Average Accounts Payable = Opening Payable + Closing Payable

2

(2) Average Payment Period = Month (or) Days in a year Creditors Turnover Ratio

(or)

Average Trade Creditors * 365 Net Credit Purchases

Significance: A high Creditor's Turnover Ratio signifies that the creditors are being paid promptly. A lower ratio indicates that the payment of creditors is not paid in time. Also, high average payment period highlight the unusual delay in payment and it affect the creditworthiness of the firm. A low average payment period indicates enhancing the creditworthiness of the company.

(4) **Working Capital Turnover Ratio**

This ratio highlights the effective utilization of working capital with regard to sales. This ratio represents the firm's liquidity position. This ratio is calculated as follows :

$$\text{Working Capital Turnover Ratio} = \frac{\text{Net Sales}}{\text{Working Capital}}$$

Net Sales = Gross Sales - Sales Return

Working Capital = Current Assets - Current Liabilities

Significance: It is an index to know whether the working capital has been effectively utilized or not in making sales. A higher working capital turnover ratio indicates efficient utilization of working capital, i.e., a firm can repay its fixed liabilities out of its working capital. Also, a lower working capital turnover ratio shows that the firm has to face the shortage of working capital to meet its day-to-day business activities unsatisfactorily.

(5) Fixed Assets Turnover Ratio

This ratio indicates the efficiency of assets management. Fixed Assets Turnover Ratio is used to measure the utilization of fixed assets. This ratio establishes the relationship between cost of goods sold and total fixed assets. Higher the ratio highlights a firm has successfully utilized the fixed assets. If the ratio is depressed, it indicates the under utilization of fixed

assets. The ratio may also be calculated as:

$$\text{Fixed Assets Turnover Ratio} = \frac{\text{Cost of Goods Sold}}{\text{Total Fixed Assets}}$$

IV. SOLVENCY RATIOS

The term 'Solvency' generally refers to the capacity of the business to meet its short-term and long-term obligations. Short-term obligations include creditors, bank loans and bills payable etc. Long-term obligations consist of debenture, long-term loans and long-term creditors etc. Solvency Ratio indicates the sound financial position of a concern to carry on its business smoothly and meet its all obligations. Some of the important ratios which are given below in order to determine the solvency of the concern:

(1) Debt - Equity Ratio

(2) Proprietary Ratio

(3) Capital Gearing Ratio

(4) Debt Service Ratio or Interest Coverage Ratio

(1) **Debt Equity Ratio**

This ratio also termed as External - Internal Equity Ratio. This ratio is calculated to ascertain the firm's obligations to creditors in relation to funds invested by the owners. The ideal Debt Equity Ratio is 1: 1. This ratio also indicates all external liabilities to owner recorded claims.

It may be calculated as

(a) Debt - Equity Ratio = External Equities

Internal Equities

or

(b) Debt - Equity Ratio = Outsider's Funds

Shareholders' Funds

The term External Equities refers to total outside liabilities and the term Internal Equities refers to all claims of preference shareholders and equity shareholders' and reserve and

surpluses.

(c) Debt - Equity Ratio = Total Long-Term Debt

Total Long-Term Funds

(or)

(d) Debt - Equity Ratio = Total Long-Term Debt

Shareholders' Funds

The term Total Long-Term Debt refers to outside debt including debenture and long-term loans raised from banks.

(2) Proprietary Ratio

Proprietary Ratio is also known as Capital Ratio or Net Worth to Total Asset Ratio. The term proprietary fund is called Net Worth. This ratio shows the relationship between shareholders' fund and total assets. It may be calculated as:

Proprietary Ratio = Shareholders' Fund

Total Assets

Shareholders' Fund = Preference Share Capital + Equity Share Capital + Reserves & Surplus

Total Assets = Tangible & Non-Tangible Assets + Current Assets

Or All Assets including Goodwill

Significance: This ratio used to determine the financial stability of the concern in general. Proprietary Ratio indicates the share of owners in the total assets of the company. A higher proprietary ratio indicates relatively little secure position in the event of solvency of a concern. A lower ratio indicates greater risk to the creditors. A ratio below 0.5 is alarming for the creditors.

(3) Capital Gearing Ratio

This is one of the Solvency Ratios. The term capital gearing refers to describe the relationship between fixed interest and/or fixed dividend bearing securities and the equity shareholders' fund.

Capital Gearing Ratio = Equity Share Capital

Fixed Interest Bearing Funds

Equity Share Capital = Equity Share Capital + Reserves and Surplus

Fixed Interest Bearing Funds = Debentures + Preference S/Capital + Other Long-Term Loans A high capital gearing ratio indicates a company is having large funds bearing fixed interest and/or fixed dividend as compared to equity share capital. A low capital gearing ratio represents preference share capital and other fixed interest bearing loans are less than equity share capital.

(4) Debt Service Ratio

Debt Service Ratio is also termed as Interest Coverage Ratio or Fixed Charges Cover Ratio. This ratio establishes the relationship between the amount of net profit before deduction of interest and tax and the fixed interest charges. It is used as a yardstick for the lenders to know the business concern will be able to pay its interest periodically.

Interest Coverage Ratio = Net Profit before Interest and Income Tax Fixed Interest Charges

V. OVERALL PROFITABILITY RATIO

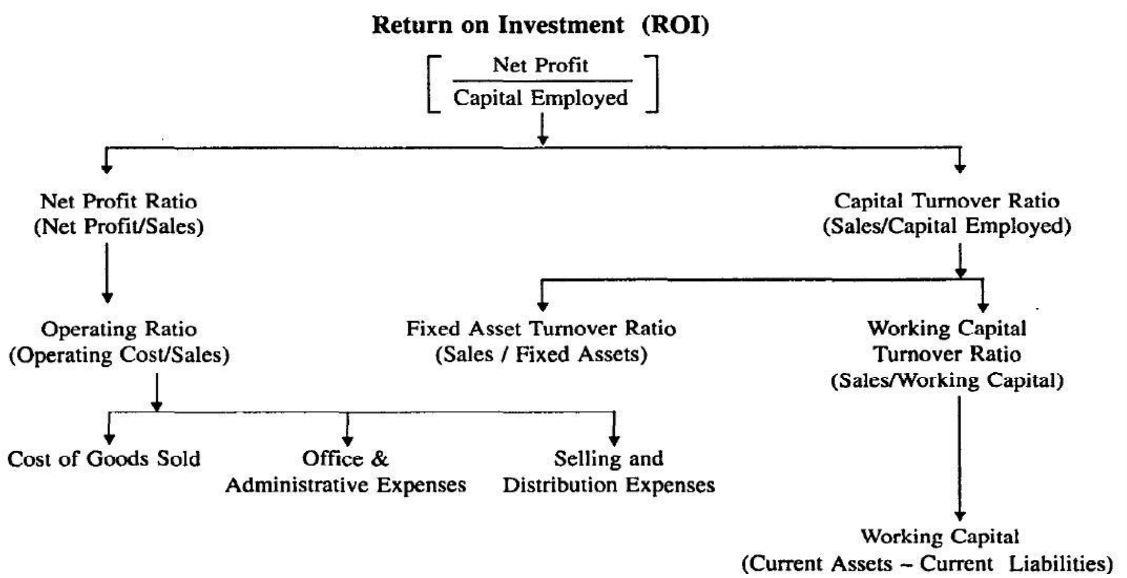
This ratio used to measure the overall profitability of a firm on the extent of operating efficiency it enjoys. This ratio establishes the relationship between profitability on sales and the profitability on investment turnover. Overall all Profitability Ratio may be calculated in the following ways:

Overall Profitability Ratio = Net Profit * 100

Sales

DU PONT CONTROL CHART (OR) DU PONT ANALYSIS

ROI indicates the efficiency of the concern which depends upon the working operations of the concern. Net Profit Ratio and Capital Turnover Ratio, as often called is usually computed on the basis of the chart represented by DU Pont. Thus it is known as "DU Pont Chart." This system of control was applied for the first time by DU Pont Company of the United States of America. The DU Pont chart helps to the management to identify the areas of problems for the variations in the return on investment so that actions may initiate to improve the performance. The following chart can explain the ROI effect by a number of factors.



FUND FLOW ANALYSIS

INTRODUCTION

Balance sheet and profit and loss account are the two principal financial statements of a firm. But these two statements are deficient in providing certain useful information required for decision making. Hence there is a need of preparing a separate statement in addition to balance sheet and P & L account. Thus a statement is invented which can provide information about different sources of funds and their various uses or sources of inflows and outflows of funds. Such a statement is called Funds flow statement.

Definition: *A statement of source and application of funds is a technical device designed to analyze the changes in the financial position of business firm between two dates.*

TECHNIQUES OF PREPARATION OF FUND FLOW STATEMENT

1. Schedule of statement of changes in working capital
2. Statement of source and uses of fund or funds flow from operation

DIFFERENCE BETWEEN THE FUND FLOW STATEMENT & BALANCE SHEET

Base	**Fund flow Statement**	**Balance sheet**
Nature	Dynamic in nature	Static in nature
Subject matter	It included the items causing changes in the working capital	It includes the balances of real personal accounts of ledger assets and liabilities and shows the total resources of the firm full life period.
Utility	Useful in decision making	Examine the soundness of the firm
Users	Internal management	External parties
Preparation	It is the exercise of post balance sheet	End product of all accounting period

.

DIFFERENCE BETWEEN FUND FLOW STATEMENT & INCOME STATEMENT

Objective	Funds raised are matched with the uses	Expenses are matched with the income
Dependency	Not helpful in preparing income statement	Helpful in preparing the fund flow statement
Utility	It is related to the movement of cash and all other items affecting the working capital	Highlights the operating result of an accounting period and changes in the financial position

.

IMPORTANCE OF FUNDS FLOW STATEMENT

1. Provide the information regarding changes in funds position

Funds Flow Statement provides the information regarding the funds, from where they have procured and where they have invested meanwhile two specific dates.

2. It helps in the formation of future dividend policy

Sometimes a firm has sufficient profit available for distribution as dividend but yet it may not be advisable to distribute dividend for lack of liquid or cash resources. In such cases, funds flow statement helps in the formation of a realistic dividend policy.

3. It helps in proper allocation of resources

The resources of a concern are always limited and it wants to make the best use of these resources. A projected funds flow statement constructed for the future helps in making managerial decisions. The firm can plan the deployment of its resources and allocate them among various applications.

4. It act as future guide

A projected funds flow statement also acts as a guide for future to the management. The management can come to know the various problems it is going to face in near future for want of funds. The firm's future needs of funds can be projected well in advance and also the timing of these needs. The form can arrange to finance these needs more effectively and avoid future problems.

5. It helps in appraising the use of working capital

It helps to appraise the performance of a financial manager in utilization of the working capital and also suggested the right way to use the working capital efficiently.

6. It helps to the overall credit worthiness of a firm

The financial institutions and banks such as SFI, IDBI, IFCI etc. all ask for funds flow statement constructed for a number of years before granting loans to know the creditworthiness and paying capacity of the firm. Hence, a firm seeking financial assistance firm these institutions has no alternative but to prepare funds flow statements.

7. It helps to know about the utilization of the sources

It also provides the information to the managers and another interested parties that the sources they have collected or provided where they have allocated.

LIMITATIONS

The funds flow statement also suffers from some of the limitations, which are as follows:

1. **Prepared from the final statements:** The funds flow statement is prepared with the help of final statements. So all the limitations of the final statements are inherent in it.

2**. Only rearrangement**: The funds flow statement is only the rearrangement of the data provided by the final statements so this is not providing the actual figure and facts.

3**. Past oriented**: The funds flow statements provides only the historical information. They are not guiding about the future.

4**. Working capital oriented**: It concentrates on the concept of the working capital and show the position of the working capital in the concern while changes in cash are more important and relevant for financial management than the working capital.

CASH FLOW STATEMENT

MEANING

Cash Flow Statement is a statement that describes the inflow (sources) and outflow (applications) of cash and cash equivalent in an enterprise during a specified period of time. Such a statement enumerates net effect of the various business transactions on cash and its equivalent and takes into account receipts and disbursement of cash. Cash flow statement summaries the causes of changes in cash position of a business enterprise between dates of two balance sheets.

PURPOSE AND USES OF CASH FLOW STATEMENT

1. It is very useful in the evaluation of cash position of a firm.

2. A projected cash flow statement can be prepared in order to know the future cash position of a concern so as to enable a firm to plan and coordinates its financial operations properly.

3. A comparison of historical and projected cash flow statement can be made so as to find the variation and deficiency or otherwise in the performance so as to enable the firm to take immediate and effective actions.

4. A series of intra firm and inter firm cash flow statement reveals whether the firm's liquidity is improving or deteriorating over a period of time.

5. Cash flow statement helps in planning the repayment of loans, replacement of fixed assets and other similar long term planning of cash.

6. Cash flow analysis is more useful and appropriate than funds flow analysis for short-term financial analysis as in a very short period it is cash, which is more relevant, then the working capital for forecasting the ability of the firm to meet its immediate obligations.

7. Cash flow statement prepared according to AS-3 is more suitable for making comparison than the funds flow statement, as there is no standards format used for the same.

8. Cash flow statement provides information of all activities classified under operating, investing and financing activities.

STRUCTURE OF CASH FLOW STATEMENT

According to AS-3, the cash flow statement should report cash flows during the period classified by operating, investment and financing activities as follows:

- Cash flow from operating activities
- Cash flow from investing activities
- Cash flow from financing activities

Format of INDIRECT METHOD
XYZ BHD
CASH FLOW STATEMENT FOR THE YEAR ENDED 31 DEC 2XXX

	$	$
Cash from operating activities:		
Net profit before taxation		xx
Adjustments for:		
Depreciation		x
Foreign exchange loss		x
Investment income		(x)
Interest expense		x
Interest income		(x)
Gain on disposal of property,plant and equipment		(x)
Loss on disposal of investment		x
Operating profit before working capital changes		xx
Decrease in receivables		xx
Increase in inventories		(xx)
Increase in trade payables		xx
Cash generated from operations		xx
Cash flows from investing activities:		
Purchase of property, plant and equipment	(x)	
Proceeds from disposal of land	(x)	
Purchase of equity investment	(x)	
Interest received	x	
Dividend received	x	
Net cash inflow from investing activities		xx
Cash flows from financing activities:		
Proceeds from issue of share capital	xx	
Proceeds from long-term loans	xx	
Redemption of preference shares	(x)	
Repayment of long-term loans	(x)	
Dividend paid	(x)	
Net cash flow from financing activities		xx
Net increase in cash and cash equivalents		xx
Cash and cash equivalents at beginning of period (**note (a)**)		xx
Cash and cash equivalents at end of period (**note (a)**)		xx

Note (a)
Cash and cash equivalents
Cash and cash equivalents consist of cash on hand and at bank, overdraft and short-term investments

	Beginning of period $	End of period $
Cash at bank and in hand	xx	xx
Short-term investment	xx	xx
Bank overdraft	(xx)	(xx)
Cash and cash equivalent	xx	xx

UNIT -3

STANDARD COSTING AND VARIANCE ANALYSIS

MEANING OF STANDARD COST AND STANDARD COSTING

The word 'standard' means a benchmark or gauge. The 'standard cost' is a predetermined cost which determines in advance what each Product or service should cost under given circumstances. Backer and Jacobsen define "Standard cost is the amount the firm thinks a Product or the operation of a process for a period of time should cost, based upon certain assumed conditions of efficiency, economic conditions and other factors.

RELEVANCE OF STANDARD COSTING

Standard costing is not only helpful for cost control purposes but it is also useful in
Production planning and policy formulation. It derives following advantages:

1. Measurement of Efficiency: It is a tool for assessing the efficiency after comparing the actual costs with standard costs to enable the management to evaluate Performance of various cost centers. By comparing actual costs with standard costs Variances are determined and management is able to identify the place of Inefficiencies. It can fix responsibility for deviation in performance. A regular check on various expenditures is also ensured by standard costing system.

2. Production and Price Policy Formulation: It becomes easy to formulate Production plans by taking into account standard costs. It is also supportive for finding prices of various products. In case, tenders are to be submitted or prices are to be quoted in advance then standard costing produces necessary data for price fixation.

3. Reduction of Work: In this system, management is supplied with useful Information and necessary information is recorded and redundant data are avoided. The report presentation is simplified and only required information is presented in such a form that management is able to interpret the information easily and usefully. Therefore, standard costing reduces clerical work to a considerable extent.

4. Management by Exception: Management by exception means that everybody is given a target to be achieved and management need not supervise each and everything. The responsibilities are fixed and everybody tries to achieve his Targets. If the things are going as per targets then the management needs not to bother.

Management devotes its time to other important things. So, management by exception is possible only when targets of work can be fixed. Standard costing enables the Determination of targets.

Variance Analysis

A variance is the difference between an actual result and an expected result. The process by which the total difference between standard and actual results is analysed is known as variance analysis. When actual results are better than the expected results, we have a favourable variance. If, on the other hand, actual results are worse than expected results, we have an adverse.

Significance of Variance Analysis

Variance analysis is used as a controlling tool. Managers can take suitable remedial actions to achieve the desired objectives if there is a variation of the actual performance.

1. It acts like a barometer for measuring business efficiency.
2. Through regular variance analysis, 'weak spots' can be ascertained and remedial actions can be taken.
3. Variance analysis aids framing of more accurate budgets in the future.
4. Variance analysis can be used for comparing the departmental performance of the organization.

DIRECT MATERIAL VARIANCES

Direct material variances are also known as material cost variances. The material cost variance is the difference between the standard cost of materials that should have been incurred for manufacturing the actual output and the cost of materials that has been actually incurred. Material Cost Variance comprises of:

(i) Material Price Variance

(ii) Material Usage Variance

(a) Material Mix Variance

(b) Material Yield Variance.

(c) Material sub usage variance.

The following equations may be used for verification of material cost variances.

(i) MCV=MPV+MUV or MPV+MMV+MYV

(ii) MUV=MMV+MYV

(a) Materials Cost Variance: Material cost variance is the difference between standard materials cost and actual materials cost. Material cost variance is ascertained as such:

Standard Material Cost = Standard Price per unit x Standard Quantity of materials Actual Material Cost = Actual price per unit x Actual quantity of materials.

MCV = Standard Material Cost – Actual Material Cost

NOTE- If the standard cost is more than the actual cost, the variance will be favorable and on the other hand, if the actual cost is more than standard cost, the variance will be unfavorable.

(b) Materials Price Variance

Materials Price Variance= Actual Quantity (Standard price–Actual price)

NOTE- If the answer is in plus, the variance will be favourable and it will be unfavourable if the result is in negative.

(c) Material Usage Variance

Materials usage variance= Standard Price (Standard Quantity – Actual Quantity)

NOTE- If the answer from the above mentioned formula is in plus, the variance will be a favourable variance but if the answer is in minus the variance will be unfavourable or adverse. .

(d) Material Mix Variance: Materials mix variance is that part of material usage variance which arises due to changes in standard and actual composition of mix.

The variance is calculated under two situations:

(i) When actual weight of mix is equal to standard weight of mix, and

(ii) When actual weight of mix is different from the standard mix.

(i) When Actual Weight and Standard Weight of Mix is Equal

In this case the formula for calculating mix variance is:

Materials Mix variance=Standard unit cost (Standard Quantity – Actual Quantity)

(ii) When Actual Weight and Standard Weight of Mix are Different

When quantities of actual material mix and standard material mix are different, the formula is:

Materials Mix variance=Standard unit cost (Revised Standard Quantity – Actual Quantity)

e) Materials Yield Variance. This is the sub-variance of material usage variance. It results from the difference between actual yield and standard yield. It may be defined as that portion of the direct materials usage variance which is due to the standard yield specified and the actual yield obtained. It may arise due to low quality of materials, defective methods of production, carelessness in handling materials, etc. Material yield variance is calculated with the following formula:

Material Yield Variance=Standard Rate (Actual yield – Standard yield)

DIRECT LABOUR VARIANCES

(a) Labour Cost Variance

Labour Cost Variance or Direct Wage Variance is the difference between the standard direct wages specified for the activity and the actual wages paid. It is the function of labour rate of pay and labour time variance. It arises due to a change in either a wage rate or in time or in both. It is calculated as follows:

LCV = Standard Time x Standard Wage Rate – Actual Time x Actual Wage Rate

(b) Labour Rate of Pay or Wage Rate Variance

The wage rates are determined by demand and supply conditions of labour conditions in labour market, wage board awards, etc. So, wage rate variance is generally uncontrollable except if it arises due to the development of wrong grade of labour for which production foreman will be responsible. This variance is calculated by the formula:

Labour Rate of Pay Variance = Actual time (Standard Rate – Actual Rate)

The variance will be favourable if actual rate is less than the standard rate and it will be unfavourable or adverse if actual rate is more than the standard rate.

(c) Labour Efficiency or Labour Time Variance

It is that part of labour cost variance which arises due to the difference between standard labour hours specified and the actual labour hours spent. It helps in controlling efficiency of workers. Labour efficiency variance is calculated as:

Labour efficiency variance = Standard Wage Rate (Standard Time–Actual Time)

NOTE- If actual time taken for doing a work is more than the specified standard time, then Standard Cost of Standard Labour Mix variance will be unfavourable. On the other hand, if actual time taken for a job is less than the standard time, the variance will be favourable.

(d) Idle Time Variance

This variance is the standard cost of actual time paid to workers for which they have not worked due to abnormal reasons. The Reasons for idle time may be power failure, defect in machinery, and non supply of materials, etc. Idle time variance is always adverse and needs investigation for its causes. This variance is calculated as:

Idle Time Variance = Idle Hours x Standard Rate

(e) Labour Mix or Gang Composition Variance

This variance arises due to change in the actual gang composition than the standard gang composition. This variance shows to the management how much labour cost variance is due to the change in labour composition.

It may be calculated in two ways:

(i) When standard and actual times of the labour mix are same:

LMV = Standard Cost of Standard Labour Mix – Standard Cost of Actual Labour Mix.

(ii) When standard and actual time of labour mix are different:

LMV = Standard Cost of Standard Labour Mix – Standard Cost of Actual Labour Mix

BUDGETARY CONTROL

DEFINITION OF BUDGET

The Chartered Institute of Management Accountants, England, defines a 'budget' as under: "A financial and/or quantitative statement, prepared and approved prior to define period of time, of the policy to be perused during that period for the purpose of attaining a given objective."

According to Brown and Howard of Management Accountant "a budget is a predetermined statement of managerial policy during the given period which provides a standard for comparison with the results actually achieved."

An analysis of the above said definitions reveal the following essentials of a budget:

1. It is prepared for a definite future period.

2. It is a statement prepared prior to a defined period of time.
3. The budget is monetary and/or quantitative statement of policy.
4. The budget is a predetermined statement and its purpose is to attain a given objective.

A budget, therefore, be taken as a document which is closely related to both the managerial as well as accounting functions of an organization.

FORECAST VS BUDGET

Forecast is mainly concerned with an assessment of probable future events. Budget is a planned result that an enterprise aims to attain. Forecasting precedes preparation of a budget as it is an important part of the budgeting process. It is said that the budgetary process is more a test of forecasting skill than anything else. A budget is both a mechanism for profit planning and technique of operating cost control. In order to establish a budget it is essential to forecast various important variables like sales, selling prices, availability of materials, prices of materials, wage rates etc. both budgets and forecasts refer to the anticipated actions and events. But still there are wide differences between budgets and forecasts as given below:

Forecasts	**Budgets**
1. Forecasts is mainly concerned with	1. Budget is related to plan events.
anticipated or probable events.	
2. Forecasts may cover for longer period.	2. Budget is prepared for a shorter period.
3. Forecast is only a tentative estimate.	3. Budget is a target fixed for a period.
4. Forecast results in planning.	4. Result of planning is budgeting.
5. The function of forecast ends with the forecast of likely events.	5. The process of budget starts where forecast ends and converts it into a budget.
6. Forecast usually covers a specific business function.	6. Budget is prepared for the business as a whole.
7. Forecasting does not act as a tool of controlling measurement.	7. Purpose of budget is not merely a planning device but also a controlling tool.

BUDGETARY CONTROL

Budgetary control is the process of establishment of budgets relating to various activities and comparing the budgeted figures with the actual performance for arriving at deviations, if any. Accordingly, there cannot be budgetary control without budgets. Budgetary control is a system which uses budgets as a means of planning and controlling.

According to I.C.M.A. England Budgetary control is defined by Terminology as "the establishment of budgets relating to the responsibilities of executives to the requirements of a policy and the continuous comparison of actual with the budgeted results, either to secure by individual actions the objectives of that policy or to provide a basis for its revision".

The above definitions reveal the following essentials of budgetary control:

1. Establishment of objectives for each function and section of the organization.
2. Comparison of actual performance with budget.
3. Ascertainment of the causes for such deviations of actual from the budgeted performance.
4. Taking suitable corrective action from different available alternatives to achieve the desired objectives.

OBJECTIVES OF BUDGETARY CONTROL

Budgetary control is planning to assist the management for policy formulation, planning, controlling and co-ordinating the general objectives of budgetary control and can be stated in the following ways:

1**. Planning:** A budget is a plan of action. Budgeting ensures a detailed plan of action for a business over a period of time.

2. **Co-ordination:** Budgetary control co-ordinates the various activities of the entity or organization and secure co-operation of all concerned towards the common goal.

3. **Control:** Control is necessary to ensure that plans and objectives are being achieved. Control follows planning and co-ordination. No control performance is possible without predetermined standards. Thus, budgetary control makes control possible by continuous measures against predetermined targets. If there is any variation between the budgeted performance and the actual performance the same is subject to analysis and corrective action.

REQUISITES FOR EFFECTIVE BUDGETARY CONTROL

The following are the requisites for effective budgetary control:

1. Clear cut objectives and goals should be well defined.
2. The ultimate objective of realising maximum benefits should always be kept uppermost.
3. There should be a budget manual which contains all details regarding plan and procedures for its execution. It should also specify the time table for budget preparation for approval, details about responsibility, cost centres etc.

4. Budget committee should be set up for budget preparation and efficient of the plan.
5. A budget should always be related to a specified time period.
6. Support of top management is necessary in order to get the full support and cooperation of the system of budgetary control.
7. To make budgetary control successful, there should be a proper delegation of authority and responsibility.
8. Adequate accounting system is essential to make the budgeting successful.
9. The employees should be properly educated about the benefits of budgeting system.
10. The budgeting system should not cost more to operate than it is worth.
11. Key factor or limiting factor, if any, should consider before preparation of budget.
12. For budgetary control to be effective, proper periodic reporting system should be introduced.

ESTBLISHING A SYSTEM FOR BUDGETARY CONTROL

In order to introduce budgetary control system, the following are essential to be considered for a sound and efficient organization. The important aspects to be considered are explained as follows:

1. ***Organization chart:*** For the purpose of effective budgetary control, it is imperative on the part of each entity to have definite 'plan of organization'. This plan of organization is embodied in the organization chart. The organization chart explaining clearly the position of each executive's authority and responsibility of the firm. All the functional heads are entrusted with the responsibility of ensuring proper implementation of their respective departmental budgets.

2. ***Budget Center****:* A budget center is defined by the terminology as 'a section of the organization of an undertaking defined for the purpose of budgetary control'. For effective budgetary control budget centre or departments should be established for each of which budget will be set with the help of the head of the department concerned.

*3****. Budget officer:*** Budget officer is usually some senior member of the accounting staff who controls the budgetary process. He does not prepare the budget himself, but facilitates and coordinates the budgeting activity. He assists the individual departmental heads and the budget committee, and ensures that their decisions are communicated to the appropriate people.

4. Budget committee: Budget committee comprising of the Managing Director, the Production Manager, Sales Manager and Accountant. The main objective of this committee is to agree on all departmental budgets, normal standard hours and allocations. In small concerns, the Budget Officer may co-ordinate the work for preparation and implementation of budgets. In large-scale concern a budget committee is setup for preparation of budgets and execution of budgetary control.

5. Budget manual: A budget manual has been defined as 'a document which set out the responsibilities of persons engaged in the routine of and the forms and records required for budgetary control". It contains all details regarding the plan and procedures for its execution.

6. Budget period: A budget is always related to specified time period. The budget period is the length of time for which a budget is prepared and employed. However, for the sake of convenience, the budget period may be fixed depending upon the following factors:

(a) Types of business

(b) Types of budget

(c) Nature of the demand of the product

(d) Length of trade cycle

(e) Economic factors

(f) Availability of accounting period

(g) Availability of finance

(h) Control operation

ADVANTAGES OF BUDGETARY CONTROL

1. It facilitates reduction of cost.
2. Budgetary control guides the management in planning and formulation of policies.
3. Budgetary control facilitates effective co-ordination of activities of the various departments and functions by setting their limits and goals.
4. It ensures maximization of profits through cost control and optimum utilization of resources.
5. It evaluates for the continuous review of performance of different budget centres.
6. It helps to the management efficient and economic production control.
7. It facilitates corrective actions, whenever there are inefficiencies and weaknesses comparing actual performance with budget.
8. It guides management in research and development.

LIMITATIONS OF BUDGETARY CONTROL

1. The budget plan is based on estimates and forecasting. Forecasting cannot be considered to be an exact science. If the budget plans are made on the basis of inaccurate forecasts then the budget programme may not be accurate and ineffective.

2. For reason of uncertainty about future, and changing circumstances which may develop later on, budget may prove short or excess of actual requirements.

3. Effective implementation of budgetary control depends upon willingness, cooperation and understanding among people reasonable for execution. Lack of cooperation leads to inefficient performance.

4. The system does not substitute for management. It is like a management tool.

5. Budgeting may be cumbersome and time consuming process.

TYPES OF BUDGETS

As budgets serve different purposes, different types of budgets have been developed. The following are the different classification of budgets developed on the basis of time, functions, and flexibility or capacity.

(A) Classification on the basis of Time

(B) Classification according to functions

(C) Classification on the basis of capacity

(A) CLASSIFICATION ON THE BASIS OF TIME

*1. **Long-term budgets:*** Long-term budgets are prepared for a longer period varies between five to ten years. It is usually developed by the top level management. These budgets summarize the general plan of operations and its expected consequences.

Long-term budgets are prepared for important activities like composition of its capital expenditure, new product development and research, long-term finance etc.

*2. **Short-term budgets:*** These budgets are usually prepared for a period of one year. Sometimes they may be prepared for shorter period as for quarterly or half yearly.

*3. **Current budgets:*** Current budgets are prepared for the current operations of the business. The planning period of current budget is generally in months or weeks. As per ICMA London, "Current budget is a budget which is established for use over a short period of time and related to current conditions."

(B) CLASSIFICATION ON THE BASIS OF FUNCTION

1. Functional budget: The functional budget is one which relates to any of the functions of an organization. The number of functional budgets depends upon the size and nature of business. The following are the commonly used:

(i) Sales budget

(ii) Purchase budget

(iii) Production budget

(iv) Selling and distribution cost budget

(v) Labour cost budget

(vi) Cash budget

(vii) Capital expenditure budget

2. ***Master budget:*** The master budget is a summary budget. This budget encompasses all the functional activities into one harmonious unit. The ICMA England defines a Master Budget as the summary budget incorporating its functional budgets, which is finally approved, adopted and employed.

(C) CLASSIFICATION ON THE BASIS OF CAPACITY

1. ***Fixed budget:*** A fixed budget is designed to remain unchanged irrespective of the level of activity actually attained.

2. ***Flexible budget:*** A flexible budget is a budget which is designed to change in accordance with the various level of activity actually attained. The flexible budget also called as Variable Budget or Sliding Scale Budget, takes both fixed, variable and semi fixed manufacturing costs into account.

CONTROL RATIOS

Ratios are used by the management to determine whether performance of its activities is going on as per estimates or not. If the ratio is 100% or more, the performance is considered as unsatisfactory. The following are the ratios generally calculated for performance evaluation.

1. Capacity ratio: This ratio indicates the extent to which budgeted hours of activity is actually utilised.

Capacity Ratio = Actual hours worked production / Budget hours × 100

2. Activity ratio: This ratio is used to measure the level of activity attained during budget period.

Activity ratio = Standard hours for actual production / Budgeted hours × 100

3. Efficiency ratio: This ratio shows the level of efficiency attained during the budget period

Efficiency ratio = Standard hours for actual production / Actual hours worked × 100

4. Calendar ratio: This ratio is used to measure the proportion of actual working days to budgeted working days in a budget period.

Calendar ratio = <u>Number of actual working days in a period</u> * 100

Budgeted working days for the period

SALES BUDGET

Sales budget is one of the important functional budgets. Sales estimate is the commencement of budgeting may be made in quantitative terms. Sales budget is primarily concerned with forecasting of what products will be sold in what quantities and at what prices during the budget period. Sales budget is prepared by the sales executives taking into account number of relevant and influencing factors such as: Analysis of past sales, key factors, market conditions, production capacity, government restrictions, competitor's strength and weakness, advertisement, publicity and sales promotion, pricing policy, consumer behaviour, nature of business, types of product, company objectives, salesmen's report, marketing research's reports, and product life cycle.

PRODUCTION BUDGET

Production budget is usually prepared on the basis of sales budget. But it also takes into account the stock levels desired to be maintained. The estimated output of business firm during a budget period will be forecast in production budget. The production budget determines the level of activity of the produce business and facilities planning of production so as to maximum efficiency. The production budget is prepared by the chief executives of the production department. While preparing the production budget, the factors like estimated sales, availability of raw materials, plant capacity, availability of labour, budgeted stock requirements etc. are carefully considered.

COST OF PRODUCTION BUDGET

After preparation of production budget, this budget is prepared. Production cost budgets show the cost of the production determined in the production budget. Cost of production budget is grouped in to material cost budget, labour cost budget and overhead cost budget. Because it break up the cost of each product into three main elements material, labour and overheads. Overheads may be further subdivided in to fixed, variable and semi-fixed overheads. Therefore separate budgets required for each item.

MATERIAL PURCHASE BUDGET

The different levels of material stock are based on planned out. Once the production budget is prepared, it is necessary to consider the requirement of materials to carryout the production activities. Material purchase budget is concerned with purchase and requirement of direct materials to be made during the budget period. While preparing the materials purchase budget, the following factors to be considered carefully:

1. Estimated sales and production.
2. Requirement of materials during budget period.
3. Expected changes in the prices of raw materials.
4. Different stock levels, EOQ etc.
5. Availability of raw materials, i.e., seasonal or otherwise.
6. Availability of financial resources.
7. Price trend in the market.
8. Company's stock policy etc.

CASH BUDGET

This budget represents the anticipated receipts and payment of cash during the budget period. The cash budget also called as Functional Budget. Cash budget is the most important of the entire functional budget because cash is required for the purpose to meeting its current cash obligations. If at any time, a concern fails to meet its obligations, it will be technically insolvent. Therefore, this budget is prepared on the basis of detailed cash receipts and cash payments. The estimated cash receipts include: cash sales, credit sales, collection from sundry debtors, bills receivable, interest received, income from sale of investment, commission received, dividend received and income from non-trading operations etc.

The estimated cash payments include the following:

1. Cash purchase
2. Payment to creditors
3. Payment of wages
4. Payments relate to production expenses
5. Payments relate to office and administrative expenses
6. Payments relate to selling and distribution expenses
7. Any other payments relate to revenue and capital expenditure
8. Income tax payable, dividend payable etc

MASTER BUDGET

When the functional budgets have been completed, the budget committee will prepare a master budget for the target of the concern. Accordingly a budget which is prepared incorporating the summaries of all functional budgets. It comprises of budgeted profit and loss account, budgeted balance sheet, budgeted production, sales and costs. The ICMA England defines a Master Budget as 'the summary budget incorporating its functional budgets, which is finally approved, adopted and employed'. The master budget represents the activities of a business during a profit plan. This budget is also helpful in coordinating activities of various functional departments.

FIXED BUDGET

A budget is drawn fro a particular level of activity is called fixed budget. According to ICWA London 'Fixed budget is a budget which is designed to remain unchanged irrespective of the level of activity actually attained." Fixed budget is usually prepared before the beginning of the financial year. This type of budget is not going to highlight the cost variance due to the difference in the levels of activity. Fixed budgets are suitable under static conditions.

FLEXIBLE BUDGET

Flexible budget is also called variable or sliding scale budget, 'takes both the fixed and manufacturing costs into account. Flexible budget is the opposite of static budget showing the expected cost at a single level of activity. According to ICMA, England defined Flexible Budget is a budget which is designed to change in accordance with the level of activity actually attained."

According to the principles that guide the preparation of the flexible budget a series of fixed budgets are drawn for different levels of activity. A flexible budget often shows the budgeted expenses against each item of cost corresponding to the different levels of activity. This budget has come into use for solving the problems caused by the application of the fixed budget.

Advantages of flexible budget

1. In flexible budget, all possible volume of output or level of activity can be covered.
2. Overhead costs are analysed into fixed variable and semi-variable costs.
3. Expenditure can be forecasted at different levels of activity.
4. It facilitates at all times related factor can be compared, which essential for intelligent decision are making.
5. A flexible budget can be prepared with standard costing or without standard costing depending upon what the company opts for.
6. A flexible budget facilitates ascertainment of costs at different levels of activity, price fixation, placing tenders and quotations.
7. It helps in assessing the performance of all departmental heads as the same can be judged by terms of the level of activity attained by the business.

DISTINCTION BETWEEN FIXED BUDGET AND FLEXIBLE BUDGET

Fixed budget	Flexible budget
1. It does not change with volume of activity.	1. It can be recast on the basis of volume.
2. All costs are related to one level of activity only.	2. Costs are analysed by behaviour and variable costs are allowed as per activity attained.
3. If budget and actual activity levels vary, cost ascertainment does not provide a correct picture.	3. Flexible budgeting helps in fixation of selling price at different levels of activity.
4. Ascertainment of costs is not possible in fixed cost.	4. Costs can be easily ascertained at different levels of activity.
. It has a limited application for cost control.	5. It has more application and can be used as a tool for effective cost control.
6. It is rigid budget and drawn on the assumption that conditions would remain constant.	6. It is designed to change according to changed conditions.
7. Comparison of actual and budgeted performance cannot be done correctly because the volume of production differs.	7. Comparisons are realistic according to the change in the level of activity.
8. Costs are not classified according to their variability, i.e., fixed, variable and semi-variable.	8. Costs are classified according to the nature of their variability.

ZERO BASE BUDGETING (ZBB)

Zero base budgeting is a new technique of budgeting. It is designed to meet the needs of the management in order to ensure the operational efficiency and effective utilization of the allocated resources of a concern. This technique was originally developed by Peter A. Phyhrr, Manager of Taxas Instrument during 1969. This concept is widely used in USA for controlling their state expenditure when Mr. Jimmy Carter was the president of the USA. At present the technique has for its global recognition for many countries have implemented in real terms.

According to Peter A. Phyhrr ZBB is defined as an "Operative planning and budgeting process which requires each manager to justify his entire budget in detail from Scratch (hence zero base) and shifts the burden of proof to each manager to justify why we should spend any money at all".

In zero-base budgeting, a manager at all levels, have to justify the importance of activity and to allocate the resources on priority basis.

Important aspect of ZBB

Zero-based budgeting involves the following important aspects:

1. It emphasizes on all requisites of budgets.
2. Evaluation on the basis of decision packages and systematic analysis, i.e., in view of cost benefit analysis.
3. Planning the activities, promotes operational efficiency and monitors the performance to achieve the objectives.

Steps involved in ZBB

The following are the steps involved in zero base budgeting:

1. No previous year performance inefficiencies is to be taken as adjustments in subsequent year.
2. Identification of activities in decision packages.
3. Determination of budgeting objectives to be attained.
4. Extent to which zero base budgeting is to be applied.
5. Evaluation of current and proposed expenditure and placing them in order of priority.
6. Assignment of task and allotment of sources on the basis of cost benefit comparison.
7. Review process of each activity examined afresh.
8. Weightage should be given for alternative course of actions.

Advantages of ZBB

1. Utilization of resources at a maximum level.
2. It serves as a tool of management in formulating production planning.
3. It facilitates effective cost control.
4. It helps to identify the uneconomical activities.
5. It ensures the proper allocation of scarce resources on priority basis.
6. It helps to measure the operational inefficiencies and to take the corrective actions.
7. It ensures the principles of management by objectives.
8. It facilitates co-operation and co-ordination among all levels of management.
9. It ensures each activity is thoroughly examined on the basis of cost benefit analysis.

PERFORMANCE BUDGETING

Performance budget has been defined as a 'budget based on functions, activities and projects.'

Performance budgeting may be described as 'the budgeting system in which input costs are related to the performance, i.e., end results.'

According to National Institute of Bank Management, Performance budgeting is, "the process of analyzing, identifying, simplifying and crystallizing specific performance objectives of a job to be achieved over a period, in the framework of the organizational objectives, the purpose and objectives of the job."

From the above definitions, it is clear that budgetary performance involves the following:

1. Establishment of well defined centers of responsibilities.
2. Establishment for each responsibility centre- a programme of target performance is in physical units.
3. Forecasting the amount of expenditure required to meet the physical plan laid down.
4. Comparison of the actual performance with the budgets, i.e., evaluation of performance.
5. Undertaking periodic review of the programme with a view to make modifications as required.

RESPONSIBILITY ACCOUNTING

Responsibility accounting involves the creation of responsibility centers. A responsibility centre may be defined as an organization unit for whose performance a manager is held accountable. Responsibility accounting enables accountability for financial results and outcomes to be allocated to individuals throughout the organization. The objective is to measure the result of each responsibility center. It involves accumulating costs and revenues for each responsibility centre so that deviation from performance target (typically the budget) can be attributed to the individual who is accountable for the responsibility centre.

TYPES OF RESPONSIBILITY CENTER

Revenue centres

Revenue centres usually have authority over sales only and have very little control over costs. To evaluate a revenue center's performance, look only at its revenues and ignore everything else. Revenue centres have some drawbacks. Their evaluations are based entirely on sales, so revenue centres have no reason to control costs. This kind of free rein encourages Al the concession manager to hire extra employees or to find other costly ways to increase sales (giving away salty treats to increase drink purchases, perhaps).

Cost Centers

Cost centres usually produce goods or provide services to other parts of the company. Because they only make goods or services, they have no control over sales prices and therefore can be evaluated based only on their total costs.

One way for a cost centre to reduce costs is to buy inferior materials, but doing so hurts the quality of finished goods. When dealing with cost centres, you must carefully monitor the quality of goods.

Profit Centres

Profit centres are businesses within a larger business, such as the individual stores that make up a mall, whose managers enjoy control over their own revenues and expenses. They often select the merchandise to buy and sell, and they have the power to set their own prices.

Profit centres are evaluated based on controllable margin — the difference between controllable revenues and controllable costs. Exclude all no controllable costs, such as allocated overhead or other indirect fixed costs, from the evaluation. The beautiful thing about running a profit centre is that doing so gives managers an incentive to do exactly what the company wants: earn profits.

Classifying responsibility centres as profit centres has disadvantages. Although they get evaluated based on revenues and expenses, no one pays attention to their use of assets. This scenario gives managers an incentive to use excessive assets to boost profits.

For managers, the upside of using more assets is the resulting increases in sales and profits. What's the downside? Well, nothing; managers of profit centres aren't held accountable for the assets that they use.

This flaw in the evaluation of profit centres can be addressed by carefully monitoring how profit centres use assets or by simply reclassifying a profit centre as an investment centre.

Investment centres

You could call investment centres the luxury cars of responsibility centres because they feature everything. Managers of investment centres have authority over — and are held responsible for — revenues, expenses, and investments made in their centres. Return on investment (ROI) is often used to evaluate their performance.

To improve return on investment, the manager can either increase controllable margin (profits) or decrease average operating assets (improve productivity).

Using return on investment to evaluate investment centres addresses many of the drawbacks involved in evaluating revenue centres, costs centres, and profit centres. However, classification as an investment centre can encourage managers to emphasize productivity over profitability — to work harder to reduce assets (which increases ROI) rather than to increase overall profitability.

UNIT – 4

MARGINAL COSTING

MARGINAL COSTING:

It is a technique of decision making, which involves-

(a) Ascertainment of Total Costs,

(b) Classification of Costs into – (1) Fixed and (2) Variable, and,

(c) Use of such information for analysis and decision- making.

Features

1. Thus, Marginal Costing is defined as the ascertainment of Marginal Cost and of the effect on profit of changes in volume or type of output, by differentiating between Fixed Costs and Variable Costs.

2. Marginal Costing is mainly concerned with providing of information to Management to assist in decision-making and to exercise control.

3. Marginal Costing is also known as "Variable Costing" or "Out of Pocket Costing"

ABSORPTION COSTING:

Absorption costing is a procedure of cost recognition wherein costs are classified on the basis of functions (not based on nature). All costs of production, both fixed and variable are included in inventory valuation.

DIFFERENCE BETWEEN MARGINAL COSTING AND ABSORPTION COSTING:

Particulars	**Marginal Costing**	**Absorption Costing**
1. Cost Recognition	Only Variable Costs are included for product costing & inventory valuation	Both Fixed and Variable Costs are considered for product costing and inventory valuation.
2. Classification	Classification of expenses is based on nature, i.e. Fixed and Variable	Classification of expenses is based on functions, i.e. Production, Administration, Selling and Distribution.

3. Treatment of Fixed Costs	Fixed Costs are regarded as a Period Cost. Profitability of different products is analyzed by their PV Ratio (and not Net Profit Ratio)	Fixed Costs are charged to cost of production. Each product bears a reasonable share of Fixed Cost and thus the profitability of a product is influenced by the apportionment of Fixed Costs.
4. Presentation	Cost data presented highlight the Total Contribution and Contribution of each product	Cost data are presented on conventional pattern. Net Profit of each product is determined after subtracting Fixed Cost along with their variable costs.
5. Effect of Stockholdin G	The difference in the magnitude of Opening Stock and Closing Stock does not affect the unit cost of production.	The difference in the magnitude of operating and Closing Stock affects the unit cost of production due to the impact of related Fixed Cost.
6. Variance Reporting	In variance Reporting, FOH Expenditure Variance only can be computed. There is no Volume Variance since Fixed Overheads are not "absorbed"	In Variance Reporting, FOH Expenditure and Volume variance can be computed. Volume variance can also be sub-classified into Capacity, Efficiency and Calendar variances.

Direct Costing

Method in which the cost of a product or operation is determined by allocating to it an appropriate portion of the variable (direct) costs. Direct costing treats fixed costs (overheads such as administrative and selling costs) as period costs (associated with time and not output). Also called contribution costing or variable costing. See also absorption costing and marginal costing.

Differential Costing

A cost that varies with every alternative. This is useful in decision-making wherein each alternative has different cost and revenues. For example, a firm wants to change their promotion method, from a billboard which costs Rs.70 to a TV advertisement which costs Rs.100, the differential cost between the two choices is Rs.30. If the expected revenue is higher than Rs.30, then the firm's best choice would be the TV advertisement. See also marginal cost.

Key Factor

A key factor in accounting is another term which is commonly used for limiting factor. This is a class of materials, finance or production facilities, or labor that is no longer available and cannot be increased within the realm of accounting within the company.

Break-even Analysis

The point at which total of fixed and variable costs of a business becomes equal to its total revenue is known as **break-even point (BEP)**. At this point, a business neither earns any profit nor suffers any loss. Break-even point is therefore also known as no-profit, no-loss point or zero profit point. Calculation of break-even point is important for every business because it tells business owners and managers how much sales are needed to cover all fixed as well as variable expenses of the business or the sales volume after which the business will start generating profit. The computation of sales volume required to break-even is known as *break-even analysis*. The concept explained above can also be presented as follows:

When there is a profit:

Revenues > Variable cost + fixed cost

At break-even point (BEP):

Revenues = Variable cost + fixed cost

When there is a loss:

Revenues < Variable cost + fixed cost

After reading this article you will be able to compute the break-even point of a single product company using two popular methods – *equation method* and contribution margin *method*. First we shall compute break-even point using these two methods and then present the information graphically (*preparation of break-even chart*).

Computation of break-even point:

(1). Use of equation method:

The application of equation method facilitates the computation of break-even point both in units and in dollars. As we have already described that the sales are equal to total variable and fixed expenses at break-even point, the equation can therefore be written as follows:

Sp × Q = Ve × Q + Fe

Or

SpQ = VeQ + Fe

Where;

Sp = Sales price per unit.

Q = Number (quantity) of units to be manufactured and sold during the period.

Ve = Variable expenses to manufacture and sell a single unit of product.

Fe = Total fixed expenses for the period.

Notice that the left hand side of the equation represents the total sales in dollars and the right hand side of the equation represents the total cost. If the information about sales price per unit, variable expenses per unit and the total fixed expenses is available, we can solve the equation for 'Q' to find the number of units to break-even. The break-even point in units can then be multiplied by the sales price per unit to calculate the break-even point in dollars. Suppose, for example, you run a manufacturing business that is involved in manufacturing and selling a single product. The annual fixed expenses to run the business are Rs.15,000 and variable expenses are Rs.7.50 per unit. The sale price of your product is Rs.15 per unit. The number of units to be sold to break even can be easily calculated using **equation method**:

Sp × Q = Ve × Q + Fe

15 × Q = 7.5 × Q + 15,000

15 Q = 7.5 Q + 15,000

15Q – 7.5Q = 15,000

7.5Q = 15,000

Q = 15,000 / 7.5

Q = 2,000 units

The break-even point in units is 2,000 units and the break-even point in rs can be computed as follows:

= (2,000 units) × (Rs.15)

= Rs.30,000

(2). Use of contribution margin method:

The method described above is known as **equation method of calculating break-even point.** Some people use another method called **contribution margin method** (read about contribution margin and its calculation). Under this method, the total fixed expenses are divided by contribution margin per unit. Consider the following computations:

Total fixed expenses / Contribution margin per unit

= 15,000 / 7.5*

= 2,000 units

or

= (2,000 units) × (Rs.15)

= Rs.30,000

*Rs.15 – Rs.7.5

A little variation of this method is to divide the total fixed expenses by the contribution margin ratio (CM ratio). Doing so results in break-even point in dollars. It is shown below:

Total fixed expenses / Contribution margin ratio

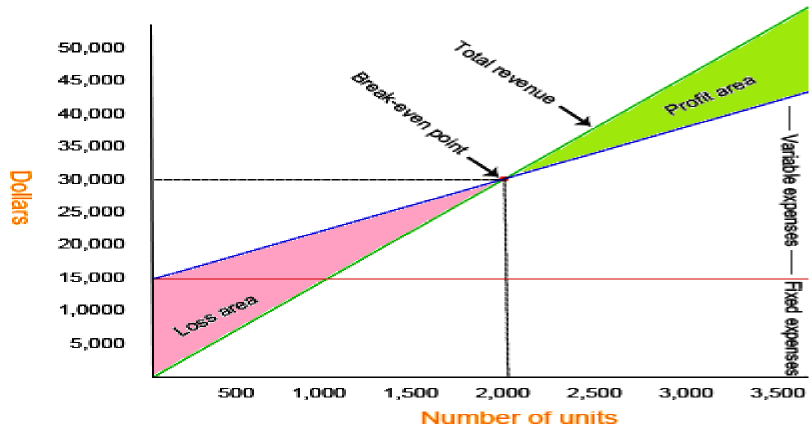
= Rs.15,000 / 0.5*

= Rs.30,000

*(Rs.15 – Rs.7.5)/Rs.15

Graphical presentation (Preparation of break-even chart or CVP graph):

The graphical presentation of dollar and unit sales needed to break-even is known as break-even chart or CVP graph:



Explanation of the graph:

1. The number of units have been presented on the X-axis (horizontally) where as dollars have been presented on Y-axis (vertically).
2. The straight line in red color represents the total annual fixed expenses of Rs.15,000.
3. The blue line represents the total expenses. Notice that the line has a positive or upward slop that indicates the effect of increasing variable expenses with the increase in production.
4. The green line with positive or upward slop indicates that every unit sold increases the total sales revenue.
5. The total revenue line and the total expenses line cross each other. The point at which they cross each other is the break-even point. Notice that the total expenses line is above the total revenue line before the point of intersection and below after the point of intersection. It tells us that the business suffers a loss before the point of intersection and makes a profit after this point. The break-even point in the above graph is 2,000 units or Rs.30,000 that agrees with the break-even point computed using equation and contribution margin methods above.
6. The difference between the total expenses line and the total revenue line before the point of intersection (BE point) is the loss area. The loss area has been filled with pink color. Notice that this area reduces as the number of units sold increases. It means every additional unit sold before the break-even point reduces the loss.
7. The difference between the total expenses line and the total revenue line after the point of intersection (BE point) is the profit area. The profit area has been filled with green color. Notice that this area increases as the number of units sold increases. It means every additional unit sold after the break-even point increases the profit of the business.

Margin of Safety (MOS)

In break-even analysis, margin of safety is the extent by which actual or projected sales exceed the break-even sales. It may be calculated simply as the difference between actual or projected sales and the break-even sales. However, it is best to calculate margin of safety in the form of a ratio. Thus we have the following two formulas to calculate margin of safety:

$$\text{MOS} = \text{Budgeted Sales} - \text{Break-even Sales}$$

$$\text{MOS} = \frac{\text{Budgeted Sales} - \text{Break-even Sales}}{\text{Budgeted Sales}}$$

Margin of Safety can be expressed both in terms of sales units and currency units.
The margin of safety is a measure of risk. It represents the amount of drop in sales which a company can tolerate. Higher the margin of safety, the more the company can withstand fluctuations in sales. A drop in sales greater than margin of safety will cause net loss for the period.

Example

Use the following information to calculate margin of safety:

Sales Price per Unit	Rs.40
Variable Cost per Unit	Rs.32
Total Fixed Cost	Rs.7,000
Budgeted Sales	Rs.40,000

Solution

Breakeven Sales Units	= Rs.7,000 ÷ (Rs.40 - Rs.32)	= 875
Budgeted Sales Units	= Rs.40,000 ÷ Rs.40	= 1,000
Margin of Safety	= (1000 − 875) ÷ 1,000	= 12.5%

Basics of Cost-Volume-Profit (CVP) Analysis

Cost-volume-profit (CVP) analysis is a key step in many decisions. CVP analysis involves specifying a model of the relations among the prices of products, the volume or level of activity, unit variable costs, total fixed costs, and the sales mix. This model is used to predict the impact on profits of changes in those parameters.

Contribution Margin-

Contribution margin is the amount remaining from sales revenue after variable expenses have been deducted. It contributes towards covering fixed costs and then towards profit.

Unit Contribution Margin

The unit contribution margin can be used to predict changes in total contribution margin as a result of changes in the unit sales of a product. To do this, the unit contribution margin is simply multiplied by the change in unit sales. Assuming no change in fixed costs, the change in total contribution margin falls directly to the bottom line as a change in profits.

Contribution Margin Ratio

The contribution margin (CM) ratio is the ratio of the contribution margin to total sales. It shows how the contribution margin is affected by a given dollar change in total sales. The contribution margin ratio is often easier to work with than the unit contribution margin, particularly when a company has many products. This is because the contribution margin ratio is denominated in sales dollars, which is a convenient way to express activity in multi-product firms.

ADVANTAGES OF MARGINAL COSTING:

Pricing decisions: Since Marginal Cost per unit is constant from period to period within a short span of time, firm decisions on pricing policy can be taken. If Fixed Cost is included, the unit cost will change from period to period depending upon the volume of output. This will make decision making difficult.

Overhead Variance: Overheads are recovered in costing based on pre- determined rates. This creates the problem of treatment of under- recovery or over- recovery of Overheads, If Fixed Overheads were included. Marginal Costing avoids such under- recovery or over recovery of Fixed Overheads since these costs are recognized as Period Costs.

3. **True Profit:** Under the Marginal Costing technique, the Stock of Finished Goods and Work- In – Progress are carried on Marginal Cost basis and the Fixed Expenses are written off to Profit and Loss Account as period Cost. This shows the true profit of the period.

4. **Break Even Analysis:** Marginal Coasting helps in Break-Even Analysis, which shows the effect of increasing or decreasing production activity on the profitability of the Company.

5. **Control over Expenditure:** Segregation of Expenses as Fixed and Variable helps the Management to exercise control over expenditure. The management can compare the actual variable expenses with the budgeted variable expenses and take corrective action through Variance Analysis.

6. **Business Decision-Making:** Marginal Costing helps Management in taking a number of business decisions like Make or Buy, Discontinuance of a particular product, acceptance of export offers, etc.

LIMITATIONS OF MARGINAL COSTING:

1. **Difficult to classify:** It is difficult to classify exactly the expenses into Fixed and Variable category. Most of the expenses are neither totally variable nor wholly fixed.

2. **Contribution is not final:** Contribution of a product itself is not a guide for optimum profitability unless it is linked with the Key Factor.

3. **Wrong pricing decisions:** Sales Staff may mistake Marginal Cost for Total Cost and sell at a price, which will result in loss or low profits. Hence, Sales Staff Should be cautioned against incorrect pricing decisions, while giving them information on Marginal Cost.

4. **Stock Valuation:** Overheads of fixed nature cannot altogether be excluded particularly in large contracts, while valuing the Work-In-Progress. In order to show the correct position, Fixed Overheads may also have to be included in Work-In-Progress. This aspect in not considered in Marginal Costing.

5. **Naive assumptions:** Some assumptions regarding the behavior of Revenues and Costs are not necessarily true in a realistic situation. For example, additional output can be sold only by reducing sale Prices.

Decision Involving Alternative Choice

Relevant Costs

Relevant costs are costs that change with respect to a particular decision. Sunk costs are never relevant. Future costs may or may not be relevant. If the future costs are going to be incurred regardless of the decision that is made, those costs are not relevant. Committed costs are future costs that are not relevant. Even if the future costs are not committed, if we anticipate incurring those costs regardless of the decision that we make, those costs are not relevant. The only costs that are relevant are those that differ as between the alternatives being considered. Including sunk costs in a decision can lead to a poor choice. However, including future irrelevant costs generally will not lead to a poor choice; it will only complicate the analysis. For example, if I am deciding whether to buy a Toyota Camry or a Subaru Legacy, and if my auto insurance will be the same no matter which car I buy, my consideration of insurance costs will not affect my decision, although it will slightly complicate the analysis.

Steps in Decision Making

Small business owners and managers make decisions on a daily basis, addressing everything from day-to-day operational issues to long-range strategic planning. The decision-making process of a manager can be broken down into six distinct steps. Although each step can be examined at length, managers often run through all of the steps quickly when making decisions. Understanding the process of managerial decision-making can improve your decision-making effectiveness.

1. Identify Problems

The first step in the process is to recognize that there is a decision to be made. Decisions are not made arbitrarily; they result from an attempt to address a specific problem, need or opportunity. A supervisor in a retail shop may realize that he has too many employees on the floor compared with the day's current sales volume, for example, requiring him to make a decision to keep costs under control.

2. Seek Information

Managers seek out a range of information to clarify their options once they have identified an issue that requires a decision. Managers may seek to determine potential causes of a problem, the people and processes involved in the issue and any constraints placed on the decision-making process.

3. Brainstorm Solutions

Having a more complete understanding of the issue at hand, managers move on to make a list of potential solutions. This step can involve anything from a few seconds of though to a few months or more of formal collaborative planning, depending on the nature of the decision.

4. Choose an Alternative

Managers weigh the pros and cons of each potential solution, seek additional information if needed and select the option they feel has the best chance of success at the least cost. Consider seeking outside advice if you have gone through all the previous steps on your own; asking for a second opinion can provide a new perspective on the problem and your potential solutions.

5. Implement the Plan

There is no time to second guess yourself when you put your decision into action. Once you have committed to putting a specific solution in place, get all of your employees on board and put the decision into action with conviction. That is not to say that a managerial decision cannot change after it has been enacted; savvy managers put monitoring systems in place to evaluate the outcomes of their decisions.

6. Evaluate Outcomes

Even the most experienced business owners can learn from their mistakes. Always monitor the results of strategic decisions you make as a small business owner; be ready to adapt your plan as necessary, or to switch to another potential solution if your chosen solution does not work out the way you expected.

Decision Regarding Determination of Sales Mix

Sales Mix Variance measures the change in profit or contribution attributable to the variation in the proportion of the different products from the standard mix.

Exploring New Market

The final target of every business firm is to increase its profitability either by increasing the sales of its existing product or by new products. In case the firm has certain production capacity being idle then it is always recommended to use that idle capacity and to implement this recommendation firm has to look towards new markets. The decision regarding exploring new markets should always be taken after considering the surplus capacity, price to be offered in the new market and effect of selling in the new market over the present market for the Goods.

Discontinuance of a product Line

The following factors should be considered before taking a decision about the discontinuance of any product:

1. The Capacity: Whether the organization is working in full capacity or not.
2. The long term prospects in the market for the product.

3. The contribution given by the product. It gives a better idea about the profitability of a product.
4. The availability of product to replace the product.
5. The effect on sale of other products.

Make or Buy

The act of choosing between manufacturing a product in-house or purchasing it from an external supplier. In a make-or-buy decision, the two most important factors to consider are cost and availability of production capacity.

An enterprise may decide to purchase the product rather than producing it, if is cheaper to buy than make or if it does not have sufficient production capacity to produce it in-house. With the phenomenal surge in global outsourcing over the past decades, the make-or-buy decision is one that managers have to grapple with very frequently.

Equipment Replacement

To replace on equipment or fixed asset is a capital investment decision rather is part of long-term capital decision. While deciding about the replacement of a capital equipment/Assets, the firm should take into consideration the resultant saving in operating costs and the incremental investment in the new equipment, In case the savings are more than the cost of raising additional funds for the new assets, the proposal may be accepted.

Change Vs Status Quo

Any firm may face the problem of continuing with the existing policy. Any change may reduce the selling price. While taking a decision, the management must keep in mind the long term interests of the firm. The following are the specific items of cost and benefits, which the management should take into account, while taking any decision.

(a) **Items of differential revenue** :

1. Saving in operation costs
2. Tax benefit
3. Increase in contribution

(b) Items of differential Expenses:

1. Increase in Fixed costs
2. Capital investment expenses
3. Increase in operating costs.

Expand or Contract

Expansion of business may result in greater flexibility, lower fixed costs and greater flexibility to meet the customers' satisfaction but Expansion may bring many communication problems. Control becomes more complex and delegation of authority may become more confused. Maximum profits may be acquired only when market will be in a position to absorb the additional volume of required sales.

Shut-down or continue

Shutdown problems involve the following types of decisions:

a) Whether or not to close down a factory, department, product line or other activity, either because it is making losses or because it is too expensive to run.

b) If the decision is to shut down, whether the closure should be permanent or temporary. Shutdown decisions often involve long term considerations, and capital expenditures and revenues.

c) A shutdown should result in savings in annual operating costs for a number of years in the future.

d) Closure results in release of some fixed assets for sale. Some assets might have a small scrap value, but others, e.g. property, might have a substantial sale value.

HUMAN RESOURCE MANAGEMENT (205)

UNIT-I

INTRODUCTION:

HUMAN RESOURCE MANAGEMENT

According to Flippo, "HRM is the planning, organizing, directing & controlling of the procurement, development, compensation, integration, maintenance & reproduction of human resources to the end that individual, organizational & societal objectives are accomplished."

MEANING OF HRM: -

HRM is management function that helps managers to recruit, select, train and develop members for an organization. Obviously HRM is concerned with the people's dimensions in organizations. HRM refers to set of programs, functions, and activities designed and carried out.

Human resource management is that part of management which is directly concerned with the people employed in an organization. It involves procuring, developing and maintaining a competent work force so as to achieve the goals of organization efficiently and effectively.

In short, human resource management may be defined as obtaining, utilizing and maintaining an effective and satisfied work force.

Human Resource Management is the process of recruitment, selection of employee, providing proper orientation and induction, providing proper training and the developing skills, assessment of employee (performance of appraisal), providing proper compensation and benefits, motivating, maintaining proper relations with labor and with trade unions, maintaining employee's safety, welfare and health by complying with labor laws of concern state or country.

Human resource management is that part of management which is directly concerned with the people employed in an organization. It involves procuring, developing and maintaining a competent work force so as to achieve the goals of organization efficiently and effectively. In short, human resource management may be defined as obtaining, utilizing and maintaining an effective and satisfied work force.

Human: refers to the skilled workforce in the organization.

Resource: refers to limited availability or scarceness.
Management: refers how to optimize and make best use of such limited and a scarce resource so as to meet the ordination goals and objectives.

Altogether, human resource management is the process of proper and maximize utilization of available limited skilled workforce. The core purpose of the human resource management is to make efficient use of existing human resource in the organization. The Best example at present situation is, construction industry has been facing serious shortage of skilled workforce. It is expected to triple in the next decade from the present 30 per cent, will negatively impact the overall productivity of the sector, warn industry experts.

Every organization's desire is to have skilled and competent people to make their organization more effective than their competitors. Humans are very important assets for the organization rather than land and buildings, without employees (humans) no activity in the organization can be done. Machines are meant to produce more goods with good quality but they should get operated by the human only.

Many great scholars had defined human resource management in different ways and with different words, but the core meaning of the human resource management deals with how to manage people or employees in the organisation.
Edwin Flippo defines- HRM as "planning, organizing, directing, controlling of procurement, development, compensation, integration, maintenance and separation of human resources to the end that individual, organizational and social objectives are achieved."

The National Institute of Personal Management (NIPM) of India has defined human resources – personal management as "that part of management which is concerned with people at work and with their relationship within an enterprise. Its aim is to bring together and develop into an effective organization of the men and women who make up enterprise and having regard for the well – being of the individuals and of working groups, to enable them to make their best contribution to its success".

According to **Decenzo and Robbins**, "HRM is concerned with the people dimension" in management. Since every organization is made up of people, acquiring their services, developing their skills, motivating them to higher levels of performance and ensuring that they continue to maintain their commitment to the organization is essential to achieve organsational objectives. This is true, regardless of the type of organization – government, business, education, health or social action".

FEATURE OF HUMAN RESOURCE MANAGEMENT

1) PART OF MANAGEMENT-Human resource management is an integral part of the management process. It is inherent in all organizations because people comprise an essential part in every

organization.

2) PERVASIVE FUNCTION-Human resource management is a function that is performed by all managers at all levels of the organization. It is an essential part of the job of every manager. Every manager has to deal with his subordinates to get things done. Therefore, human resource management is required in all functional areas such as finance, marketing, production etc.

3) CONCERNED WITH PEOPLE-Human resource management is concerned with people at work and their relationships. It deals with employees as individual and as groups.

4) WIDE SCOPE- The scope of human resource management is very wide. It includes a broad spectrum of activities like recruitment, selection, placement, training, transfer, promotion, appraisal and compensation of employees.

HUMAN RESOURCE MANAGEMENT: CONCEPT

Human Resource Management has come to be recognized as an inherent part of management, which is concerned with the human resources of an organization. Its objective is the maintenance of better human relations in the organization by the development, application and evaluation of policies, procedures and programmes relating to human resources to optimize their contribution towards the realization of organizational objectives.
In other words, HRM is concerned with getting better results with the collaboration of people. It is an integral but distinctive part of management, concerned with people at work and their relationships within the enterprise. HRM helps in attaining maximum individual development, desirable working relationship between employees and employers, employees and employees, and effective modeling of human resources as contrasted with physical resources. It is the recruitment, selection, development, utilization, compensation and motivation of human resources by the organization.

NATURE

Human Resource Management is a process of bringing people **and** organizations together so that the goals of each are met. The various features of HRM include:
•It is pervasive in nature as it is present in all enterprises.

•Its focus is on results rather than on rules.

•It tries to help employees develop their potential fully
.
•It encourages employees to give their best to the organization.

•It is all about people at work, both as individuals and groups.

•It tries to put people on assigned jobs in order to produce good results.

•It helps an organization meet its goals in the future by providing for competent and well-motivated employees.

• It tries to build and maintain cordial relations between people working at various levels in the organization.

• It is a multidisciplinary activity, utilizing knowledge and inputs drawn from psychology, economics, etc.

HUMAN RESOURCE MANAGEMENT: SCOPE

The scope of HRM is very wide:

1. Personnel aspect-This is concerned with manpower planning, recruitment, selection, placement, transfer, promotion, training and development, layoff and retrenchment, remuneration, incentives, productivity etc.

2. Welfare aspect-It deals with working conditions and amenities such as canteens, crèches, rest and lunch rooms, housing, transport, medical assistance, education, health and safety, recreation facilities, etc.

3. Industrial relations aspect-This covers union-management relations, joint consultation, collective bargaining, grievance and disciplinary procedures, settlement of disputes, etc.

HUMAN RESOURCE MANAGEMENT: OBJECTIVES

• To help the organization reach its goals.

• To ensure effective utilization and maximum development of human resources.

• To ensure respect for human beings. To identify and satisfy the needs of individuals.

• To ensure reconciliation of individual goals with those of the organization.

• To achieve and maintain high morale among employees.

• To provide the organization with well-trained and well-motivated employees.

• To increase to the fullest the employee's job satisfaction and self-actualization.

• To develop and maintain a quality of work

IMPORTANCE OF HUMAN RESOURCE MANAGEMENT

An organization cannot build a good team of working professionals without good Human Resources. The beneficial effects of these functions are discussed here:

1. Recruitment and Training
The HR managers come up with plans and strategies for hiring the right kind of people. They design the criteria which is best suited for a specific job description. When needed, they also provide training to the employees according to the requirements of the organization.

2. Performance Appraisals
Performance appraisals, when taken on a regular basis, motivate the employees.

3. Maintaining Work Atmosphere
A good working condition is one of the benefits that the employees can expect from an efficient human resource team. A safe, clean and healthy environment can bring out the best in an employee.

4. **Managing Disputes**
They take timely action and prevent things from going out of hands.

5. Developing Public Relations
The HR department plays an active role in preparing the business and marketing plans for the organization too.

EVOLUTION OF HUMAN RESOURCE MANAGEMENT

Period before industrial revolution – The society was primarily an agriculture economy with limited production. Number of specialized crafts was limited and was usually carried out within a village or community with apprentices assisting the master craftsmen. Communication channel were limited.
Period of industrial revolution (1750 to 1850) – Industrial revolution marked the conversion of economy from agriculture based to industry based. Modernization means if communication gave way to industrial setup. A department was set up to look into workers' wages, welfare and other related issues. This led to emergence of personnel management with the major task as
- Worker's wages and salaries

- Worker's record maintenance
- Worker's housing facilities and health care

An important event in industrial revolution was growth of Labour Union (1790) – The works working in the industries or factories were subjected to long working hours and very less wages. With growing unrest, workers across the world started protest and this
led to the establishment of Labour unions. To deal with labour issues at one end and management at the other Personnel Management department had to be capable of politics and diplomacy, thus the industrial relation department emerged.

Post Industrial revolution – The term Human resource Management saw a major evolution after 1850. Various studies were released and many experiments were conducted during this period which gave HRM altogether a new meaning and importance.

A brief overview of major theories release during this period is presented below

- Frederick W. Taylor gave principles of scientific management (1857 to 1911) led to the evolution of scientific human resource management approach which was involved in
- Worker's training
- Maintaining wage uniformity
- Focus on attaining better productivity.
- Hawthorne studies, conducted by Elton Mayo & Fritz Roethlisberger (1927 to 1940). – Observations and findings of Hawthrone experiment shifted the focus of Human resource from increasing worker's productivity to increasing worker's efficiency through greater work satisfaction.
- Douglas McGregor Theory X and Theory Y (1960) and Abraham Maslow's Hierarchy of needs (1954) – These studies an dobservations led to the transition from the administrative and passive Personnel Management approach to a more dynamic Human
Resource Management approach which considered workers as a valuable resource.

As a result of these principles and studies, Human resource management became increasingly line management function, linked to core business operations. Some of the major activities of HR department are listed as-

1. Recruitment and selection of skilled workforce.
2. Motivation and employee benefits
3. Training and development of workforce
4. Performance related salaries and appraisals.

Challenges of HRM

1. Globalization: - HR managers have to deal with Growing internationalization, more heterogeneous functions and involvement in employee's personal life.

2. Corporate Re-organizations:- It is the role of HRM to deal with the anxiety, uncertainties, insecurities and fears during the dynamic trends of Reorganization that relates to mergers and acquisitions, joint ventures, take over, internal restructuring of organizations.

3. **New Organizational forms: -**HRM faces the challenge to deal with new forms of organizational structure.

4. Changing Demographics of Workforce: - Dual career couples, large chunk of young blood between age old superannuating employees, working mothers, more educated and aware workers etc.

5. **Changed employee expectations: -** Traditional allurements like job security, house, and remunerations are the things of olden times, now employees are demanding empowerment and equality with management.

6. **New Industrial Relations Approach: - U**nions have understood that strikes and militancy have lost their relevance and unions are greatly affected by it. How to adopt a proactive industrial relations approach which should enable HR specialist to look into
Challenges unfolding in the future and to be prepared to convert them into opportunities.

7. **Renewed People Focus: -** The challenge of HR manager is to focus on people and make them

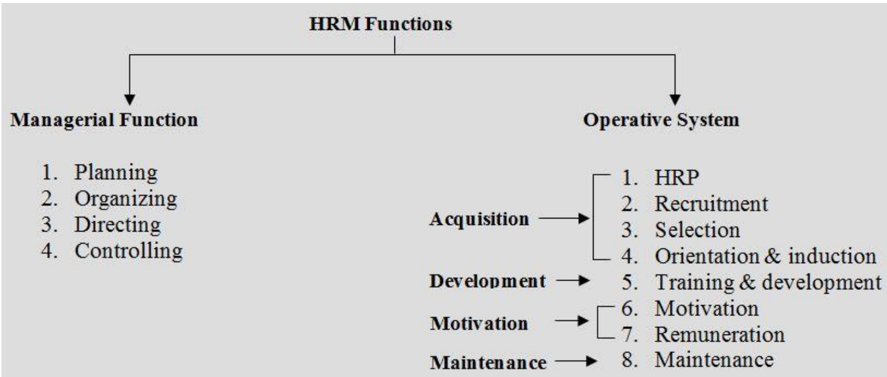
justifiable and sustainable.

8. **Managing the Managers: -** The challenge of HRM is how to manage this tribe? How to make them realize that the freedom given to them is to enable them make quick decisions in the interest of the organization and not to resort to witch-hunting.

9. **Weaker Society interests: -** It is a challenge of today's HR managers to see that these weaker sections are neither denied their rightful jobs nor are discriminated against while in service.

10. **Contribution to the success of organizations: -** The biggest challenge to an HR manager is to make all employees contribute to the success of the organization in an ethical and socially responsible way. Because society's well being to a large extent depends on its organizations.

FUNCTIONS OF HRM



1. **Staffing**

Manpower or human resource planning
- Job analysis: competency matrix
- Job description/Position description
- Job evaluation
- Determination of actual number of employees needed for various jobs (Human Capital Architecture) Recruitment and selection of people

-Attracting talent
- Selection process
- Motivating the talent to join the organization

2. **Training and Development**

Induction

- Acclimatization process for new employees training
- Competency mapping and gap analysis
- Appraisal
- Training need assessment
- Training process

Development

- Potential assessment
- Development process

Career planning

- Fast track (talent management)
- Normal career path management

3. **Motivation**

Appraisal

- Appropriate appraisal system

- Appraisal process

Compensation and benefits

Determination of salary and benefit

Rewards

- Recognition motivation
- Monetary motivation

4. **Maintenance**

Communication

- Installing and maintaining two way communication

Health

- Design/Selection and implementation of health schemes

Safety

- Awareness creation
- System for safe working conditions

Employee relations

- Establishing fairness

-Designing and implementing employee relations policies and procedures Legalities
- Dispute
- Grievances

- Unions
- Employment related legalities
- Health and safety related legalities)

Differences between Personnel Management (PM) and Human Resources Management (HRM)

1. Personnel mean employed persons of an organization. Management of these people is personnel management (PM). Human resource management (HRM) is the management of employees' knowledge, aptitudes, abilities, talents, creative abilities and skills/competencies.

2. PM is traditional, routine, maintenance-oriented, administrative function whereas HRM is continuous, on-going development function aimed at improving human processes.

3. PM is an independent function with independent sub-functions. HRM follows the systems thinking approach. It is not considered in isolation from the larger organization and must take into account the linkages and interfaces.

4. PM is treated like a less important auxiliary function whereas HRM is considered a strategic management function.

5. PM is reactive, responding to demands as and when they arise. HRM is proactive, anticipating, planning and advancing continuously.

6. PM is the exclusive responsibility of the personnel department. HRM is a concern for all managers in the organization and aims at developing the capabilities of all line managers to carry out the human resource related functions.

7. The scope of PM is relatively narrow with a focus on administering people. The scope of HRM views the organization as a whole and lays emphasis on building a dynamic culture.

8. PM is primarily concerned with recruitment, selection and administration of manpower. HRM takes efforts to satisfy the human needs of the people at work that helps to motivate people to make their best contribution.

9. Important motivators in PM are compensation, rewards, job simplification and so on. HRM considers work groups, challenges and creativity on the job as motivators.

10. In PM improved satisfaction is considered to be the cause for improved performance but in HRM it is the other way round (performance is the cause and satisfaction is the result).

11. In PM, employee is treated as an economic unit as his services are exchanged for wages/salary. Employee in HRM is treated not only as economic unit but also a social and psychological entity.

12. PM treats employee as a commodity or a tool or like equipment that can be bought and used. Employee is treated as a resource and as a human being.

STRATEGIES FOR THE NEW MILLENNIUM

An HRMS is one of the most, if not the most, important business systems within a company. People are often the most expensive resource within a company, and therefore, how we manage the information related to them can drastically affect the corporate bottom line. HR managers for the most part are aware of their various disciplines but many of them have not had a great track record when it comes to being able to translate their information needs into business requirements. This is changing slowly as most new employees coming into the HR profession are computer literate and are used to translating their HR business needs into systems solutions. The Internet is also playing a major role in how HR managers are entering the 21st century. Literally every HR manager these days is using e-mail and surfing the Net. There is a new awareness of the need for rapid information and of the many options for obtaining the right information, fast.

ROLE OF HRM IN STRATEGIC MANAGEMENT

- Business Process Reengineering
- Empowerment
- Total quality management
- Quality Circles
- Work schedules like flexi- timings, job rotation, job sharing, etc.

Strategic HR management involves more than just the administration of human resource programs or activities. However, you still need to do these activities.
Effective people management is all about application of strategic management to people management. You may prefer to call them employees or human capital. It does not really matter.

Discover how the right people management or right strategic human resource management can help your organization …

To incorporate Human Resource plans into the “mainstream of organizational strategy and management";

To instill belief on the importance of people in achieving the overall corporate plan, that people add value to the business operations of your organization;

To ensure that HR people learn to think and act strategically when carrying out their duties and responsibilities...and how these contribute to the achievement of organizational business plans;
To design performance incentive plans and strategies with the intention to continuously motivate employees and thus improve customer service in a dynamic environment;

To arrange for the right training programs to enhance current skills of your people or to provide them with new skills in line with your core business activities and at the same time improve your organization's capability;

To engage, motivate and retain talents,

To ensure that employee termination is properly done, according to existing laws, in order to minimize damage to your organization's image,

In short, you will learn how your human resources, increasingly described as “the only important asset”, can play their important role in the accomplishment of the overall strategic plan and the success of your organization.

New ways, new ideas in strategic human resource management are emerging! On the other hand, you will note that HR is also taking a battering. This becomes very apparent during periods of poor financial performance.

Join those who are changing the way they manage their people.

There is a growing interest by organizations in implementing strategic human resource management. Do not allow others to leave you behind. Do not allow important opportunities pass you by.

DEFINITION OF 'HUMAN CAPITAL'
A measure of the economic value of an employee's skill set. This measure builds on the basic production input of labor measure where all labor is thought to be equal. The concept of human capital recognizes that not all labor is equal and that the quality of employees can be improved by investing in them. The education, experience and abilities of an employee have an economic value for employers and for the economy as a whole.
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capital recognizes that not all labor is equal and that the quality of employees can be improved by investing in them. The education, experience and abilities of an employee have an economic value for employers and for the economy as a whole.

Increasingly, companies are investing in human capital and elevating the role of the human capital professional to a seat at the board room table. Why is this? Well, let's first start with a look at the terms human resources and human capital to better understand. As defined, resources are the total means available or an available supply that can be drawn on when needed. Resources, quite simply, can be drawn on until exhausted. Capital, however, is defined as any form of wealth employed or capable of being employed in the production of more wealth. Capital can grow with investment to produce more capital.

Human capital is a measure of the economic value of an employee's skill set. This measure builds on the basic production input of labor measure where all labor is thought to be equal. The concept of human capital recognizes that not all labor is equal and that the quality of employees can be improved by investing in them; the education, experience and abilities of employees have economic value for employers and for the economy as a whole.

Economist Theodore Schultz invented the term "human capital" in the 1960s to reflect the value of human capacities. He believed human capital was like any other type of capital; it could be invested in through education, training and enhanced benefits that lead to an improvement in the quality and level of production.

An organization is often said to only be as good as its people. Directors, employees and leaders that make up an organization's human capital are critical to its success. Human capital is typically managed by an organization's human capital management (HCM) department, commonly referred to as the human resources department. A HCM department oversees the organization's workforce acquisition, management and optimization. The HCM department's other directives include workforce planning and strategy, recruitment, employee training and development, and reporting and analytics.

Why is human capital management important in organizations ?

Who do you think are the most valuable resource in an organization ?

Employees. Individuals who spend maximum part of their day contributing towards the success of an organization are its most crucial resource. Employees can either make or break an organization, truly making them an organization's lifeline.

Human Capital Management is essential for hiring, managing, training and retaining talented and high performing employees.

Human Capital management plays an important role in the recruitment process. It ensures that human resource professionals hire individuals who really deserve to be in the organization. Recruiting the right talent is of utmost importance. An individual who is not fit for a particular role will not be able to contribute much in the long run.

Talent acquisition is one of the most crucial responsibilities of human resource professionals, often neglected in most organizations. **Do not hire someone just because you need to fill a vacant position or your superiors have asked you to do so. Analyze the background of an individual thoroughly**. Try to find out why someone really wants to join your organization? Remember money should not be the only criterion why someone wants to change and join a new organization. An individual who has been assigned the role of acquiring new talents should not forget to check an applicant's past experience, interests, professional qualification and reasons for changing previous job. If you really like someone, try to do some reference check as well. Do discuss with the applicant before calling up his previous organization or boss, else it might land him/her in trouble.

Human Capital management plays an important role in orienting a new employee to the system. Boring and meaningless induction programs lead to confusions and an employee eventually loses interest in the organization. Do not load someone with unnecessary information, the very first day he steps into the organization. Believe me, he will run away. Make him feel comfortable. Ask him/her not to bring lunch from home. Order lunch from outside and ask all his team members to have lunch together. Such small initiatives go a long way in breaking ice among team members.

It is essential for employees to upgrade their knowledge with time to cope up with the changing situations. Human Capital Management helps in training the employees and making them indispensable resource for the organization. Motivate employees to take up special courses or online programs which would help them in their job. Employees who do not brush up on their skills from time to time find it difficult to survive in the long run. Inculcate the habit of reading. Internet is also one of the good options to keep oneself abreast with the latest developments.

Human Capital management plays an important role in increasing the efficiency of employees. Individuals are in a position to contribute more towards the system, eventually increasing the overall productivity of the organization.

To conclude, **human capital management is important for:**

- Hiring the right talent
- Orienting him/her to the organization
- Making a new employee feel comfortable
- Training employees in order to constantly upgrade their skills
- Retaining employees
- Making employees self sufficient and prepare them for adverse conditions

Human Capital management helps in developing skills of employees which help them stand apart from the rest.

EMOTIONAL QUOTIENT

EQ actually stands for Emotional Intelligence Quotient. Much like an intelligence quotient, or IQ, an EQ is said to be a measure of a person's emotional intelligence. However, there is much debate surrounding the legitimacy of a definition of emotional intelligence quotient, primarily because there is no standard **against** which it can be measured.

Research on EQ began with Yale psychologist Peter Salovey and John Mayer of the University of New Hampshire in the late 1980s. EQ is a concept that was further popularized by Daniel Goleman, another well-respected psychologist, who has written many books on the subject and is co-chair of The Consortium for Research on Emotional Intelligence in Organizations. While these and many other psychology experts view EQ as a scientific study of social behavior and relationships, the actual science behind measuring EQ is often convoluted at best.

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Emotional intelligence can be defined as the ability to monitor one's own and other people's emotions, to discriminate between different emotions and label them appropriately and to use emotional information to guide thinking and behavior. Emotional intelligence also reflects abilities to join intelligence, empathy and emotions to enhance thought and understanding of interpersonal dynamics. However, substantial disagreement exists regarding the definition of EI, with respect to both terminology and operationalizations. Currently, there are three main models of EI:

1. Ability model
2. Mixed model (usually subsumed under trait EI)
3. Trait model

Different models of EI have led to the development of various instruments for the assessment of the construct. While some of these measures may overlap, most researchers agree that they tap different constructs.

Specific ability models address the ways in which emotions facilitate thought and understanding. For example, emotions may interact with thinking and allow people to be better decision makers (Lyubomirsky et al. 2005). A person who is more responsive emotionally to crucial issues will attend to the more crucial aspects of his or her life. Aspects of emotional facilitation factor is to also know how to include or exclude emotions from thought depending on context and situation. This is also related to emotional reasoning and understanding in response to the people, environment and circumstances one encounters in his or her day-to-day life.

Meaning:

Emotional quotient is a buzzword in recent times. Time and again, it is suggested that a manager should possess a fair amount of intelligence quotient along with emotional intelligence in order to become successful. It is proved that effectiveness of an organization depends on the efficiency of the managers.

The emotions of a human being can be love, hatred, anger and happiness. The manager has to control these emotions to a certain extent so that they can handle any situation with calmness. The ability to manage emotions is measured through emotional quotient.

Definitions:

According to Dr Goleman, 'emotional intelligence is defined as a set of skills or competencies, which provide human resource professionals, managers, and anyone in the world of work, with a comprehensive tool to define, measure and develop emotional skills'. Emotional intelligence can also be defined as the capacity to recognize our own feelings and those of others for motivating ourselves and managing emotions well in our social interactions.

Emotional quotient consists of five important dimensions:

1. Knowing one's emotions.

2. Controlling one's emotions.

3. Recognizing emotions in others (empathy).

4. Controlling emotions in others.

5. Improvement in emotional control.

Components of Emotional Intelligence:

Daniel Goleman has identified a set of emotional competencies that differentiate individuals with their emotional intelligence.

1. Self-awareness:

The capacity for understanding one's emotions, strengths, weaknesses and self- confidence.

2. Self-management:

The capacity for efficiently managing one's motives and regulating one's behaviour, self-control, adaptability, achievement, orientation and initiative.

3. Social awareness:

The capacity for understanding what others are saying and feeling. And why they feel and act as they do.

4. Social skills:

The capacity for acting in such a way that one is able to get the desired results from others and reach personal goals, developing others, leadership, conflict management and teamwork.

Benefits of Emotional Intelligence:

Judicious applications of emotional intelligence can lead to the following results:

1. Understanding and enhancing emotional intelligence enhances management skills.

2. It can provide team effectiveness.

3. It assists managers to have flexible planning.

4. Emotional intelligence assists managers in motivating others.

5. Better decision-making comes from a balance between head and heart.

6. It can help a person achieve a whole range of career development factors such as leadership, decision-making, open communication, trusting relationship and customer loyalty.

MENTORING

Mentoring is most often defined as a professional relationship in which an experienced person (the mentor) assists another (the mentoree) in developing specific skills and knowledge that will enhance the less-experienced person's professional and personal growth.

What does a mentor do?

- The following are among the mentor's functions:
- Teaches the mentoree about a specific issue
- Coaches the mentoree on a particular skill

- Facilitates the mentoree's growth by sharing resources and networks
- Challenges the mentoree to move beyond his or her comfort zone
- Creates a safe learning environment for taking risks.
- Focuses on the mentoree's total development

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In 2004, David Clutterbuck, an academic who studied mentoring relationships, coined an acronym for what mentors do:

- Manage the relationship
- Encourage
- Nurture
- Teach
- Offer mutual respect
- Respond to the learner's needs

MENTORING PROCESS

1. Design Your Mentoring Program

The starting point for any mentoring program begins with two important questions:

- Why are you starting this program?
- What does success look like for participants and the organization?

To answer these questions you will need to dive deep to understand your target audience. Make sure you understand who they are, where they are, their development needs, and their key motivations to participate. Translate your vision into SMART objectives: specific, measurable, attainable, relevant and time-bound. Objectives provide direction to program participants, establish program key performance indicators (KPIs), and help organizational leaders understand why they should offer their support.

Successful mentoring programs offer both structure and flexibility. Structure provides participants a mentoring workflow to follow and is critical to help participants achieve productive learning that reaches defined goals. Similarly, flexibility is essential to support varying individual mentoring needs across specific learning goals, preferences, and learning style.

Key design decisions include:

- Enrollment – is it open, application, or invite only?
- Mentoring style – can be traditional, flash, reverse
- Connection type – possibly 1:1, group, or project
- Connection duration – typically weeks or months, or perhaps even just a single session
- Community/social aspects beyond formal mentoring, tracking and reporting needs.

A good idea is to create a program workflow diagram to explain each step of your program. You can provide details such as key actions, timeframes, support resources, and criteria for moving to the next phase. Mark areas that will require some flexibility to support user needs.

Mentoring software allows you to deliver a wide-variety of mentoring programs. Regardless if a small or large program, mentoring software is easy to configure and will save you time and cost in getting your program started and running smoothly.

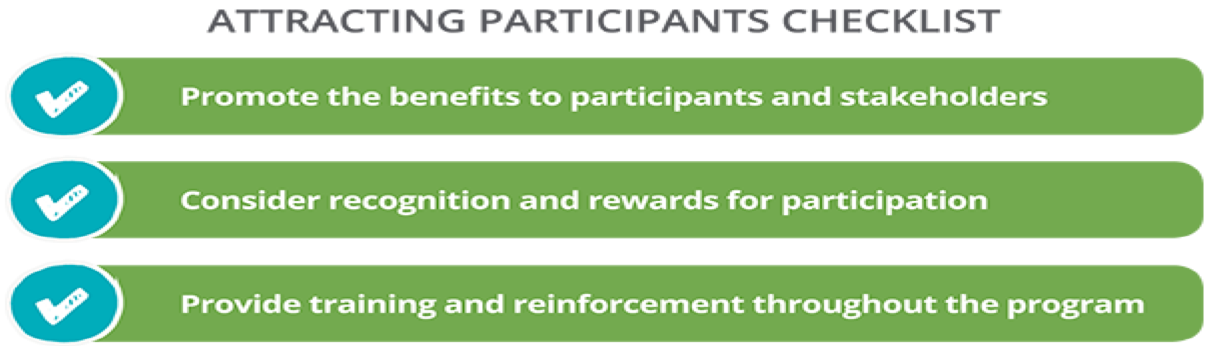
2. Attract Participants for Your Mentoring Program

The best designed mentoring programs won't get far without effective program promotion, mentor recruitment, and training.

When new mentoring programs are introduced in organizations, there is generally natural enthusiasm. Yet this enthusiasm doesn't always translate into high participation rates. A common reason is the absence of effective promotion. Don't assume potential mentors and mentees understand the benefits. For many, this will be their first opportunity to participate in mentoring. You will need to convince them that participating is worth their time and effort. Beyond participants, key leaders and stakeholders will need to be educated on the benefits of the program and strategic value to the organization.

Consider the needs of mentors. Building a solid base of mentors can be a challenge. It is important to understand the positive and negative factors that impact mentor participation. Once you have identified them, look for creative ways to reinforce positive drivers and lower the hurdles of negative ones throughout the mentoring process. For example, mentors are often busy people with limited time to spend. How can you help mentors be more efficient with the time they have to dedicate to mentoring? Also consider recognition and reward strategies. Formally recognizing mentor involvement can be very motivating and help attract additional mentors to the program.

Lastly, productive mentoring doesn't just happen. Provide training to mentors and mentees regarding the program's goals, participant roles, mentoring best practices, and your mentoring process. Help mentors and mentees clarify their own objectives. The need for training and guidance doesn't end after the initial orientation. Provide tips and best practices throughout the mentoring program to help participants stay on track and get the most out of the program.



- Promote the benefits to participants and stakeholders
- Consider recognition and rewards for participation
- Provide training and reinforcement throughout the program

The Chronus mentoring solution provides the best practices, content and infrastructure to recruit, enroll and train program participants.

3. Connect Mentors and Mentees

A productive mentoring relationship depends on a good match.

Matching is often one of the most challenging aspects of a program. Participants will bring various competencies, backgrounds, learning styles and needs. A great match for one person may be a bad match for another.

Matching starts by deciding which type of matching you'll offer in your program: self-matching or admin-matching. Consider giving mentees a say in the matching process by allowing them to select a particular mentor or submit their top three choices. Self-matching is administrative light, which in larger programs can be a huge plus.

For more structured programs, such as large groups of new students at universities, or groups of new corporate employees, you may want to get the program started by bulk, or admin-matching.

Evaluate various match combinations before finalizing as ensuring quality mentors for hard- to-match mentees can be challenging.

4. Guide Mentoring Relationships

Now that your participants are enrolled, trained, and matched, the real action begins.

It is also where mentoring can get stuck. Left to themselves, many mentorships will take off and thrive. But some may not. Why? Because mentoring is not typically part of one's daily routine. Without direction and a plan, the mentoring relationship is vulnerable to losing focus and momentum. That is why providing some structure and guidance throughout the mentorship is vital to a successful mentoring program.

One best practice is to ensure all mentorships have goals and action plans. This serves two purposes. First, it brings focus at the onset, which helps a mentorship get off to a good start. Second, it adds accountability to accomplish something.

Provide all mentoring relationships with timely and relevant "help resources" (topical content, mentoring best practices, etc.) throughout the mentorship. Chunk-sized content delivered at key points is ideal.

As a mentoring connection progresses, establish checkpoints where mentorships report on their progress. Even if your organization doesn't choose to formally track the details, just the act of reporting progress helps mentors and mentees stay productive.

Lastly, have a formal process that brings closure to the mentoring experience. Within this process, provide an opportunity for both the mentor and mentee to reflect upon what was learned, discuss next steps for the mentee, and provide feedback on the benefits of the program and process.

Chronus software makes guiding, or "facilitating," your program's mentoring connections very easy and enables your participants to be highly productive

5. Measure Your Mentoring Program

Understanding how your program measures up to expectations may well be the most important phase of all.

Mentoring is a significant investment when you consider program management, infrastructure, and the valuable time of participants. Articulating the impact is essential to secure ongoing funding and support. In addition, the measure phase is also focused on assessing program health to identify trouble spots and opportunities.

Mentoring programs should be tracked, measured, and assessed at three altitudes: the program, the mentoring connection, and the individual. To be effective you need the ability to capture metrics and feedback throughout the program lifecycle.

At the program level, build metrics around defined business objectives. For example, in a diversity mentoring program you may want to compare promotion rates of program participants to non-participants. Also track “funnel” conversion metrics, which show the progress participants make at each step of the mentoring program starting at enrollment. Conversion metrics provide essential insight into program health.

For mentoring connections, you want to understand mentorship behavior to identify roadblocks and opportunities. Common questions you will want to ask are: Is the mentoring timeframe too long, too short, or just right? Are mentorships getting off to fast starts or lagging? Are participants leveraging content resources you have provided?

For participants, you want to understand the impact of mentoring in terms of outcomes while acquiring program feedback. One of the easiest ways to capture outcome and feedback is through surveys. Ask participants and stakeholders how well the mentoring program met their goals and the goals of the organization. Also ask them for their ideas for improving the program

ESOP

An **Employee Stock Ownership Plan (ESOP)** is an employee benefit plan which makes the employees of company owners of stock in that company. Several features make ESOPs unique as compared to other employee benefit plans. First, only an ESOP is required by law to invest primarily in the securities of the sponsoring employer. Second, an ESOP is unique among qualified employee benefit plans in its ability to borrow money. As a result, "leveraged ESOPs" may be used as a technique of corporate finance.

The **benefits** for the company include increased cash flow, tax savings, and increased productivity from highly motivated workers. The main benefit for the employees is the ability to share in the company's success. Due to the tax benefits, the administration of ESOPs is regulated, and numerous restrictions apply also called stock purchase plan

An employee stock ownership plan (ESOP) is a qualified defined-contribution employee benefit

(ERISA) plan designed to invest primarily in the stock of the sponsoring employer. ESOPs are "qualified" in the sense that the ESOP's sponsoring company, the selling shareholder and participants receive various tax benefits. ESOPs are often used as a corporate finance strategy and are also used to align the interests of a company's employees with those of the company's shareholders.

WHAT IT IS:

An employee stock ownership plan (ESOP), also known as a stock purchase plan, is a defined contribution plan whereby an employer invests the fund's assets in its own stock.

HOW IT WORKS (EXAMPLE):

To establish an ESOP, a corporation first establishes a trust in which the company's employees are partial owners. The employees then make contributions to the trust via the employer (this is usually done through payroll deductions). The trust in turn purchases shares of the company. These purchases are allocated to individual employee accounts within the ESOP. Companies can allocate contributions to employees in a number of ways, but they usually revolve around the employee's years of service and compensation.

A formal plan document sets forth the terms and conditions of the ESOP. The ESOP's plan document describes how the plan operates, who is eligible to participate, and who performs administrative and trustee functions. The trustee actually holds the ESOP shares and has a fiduciary responsibility to manage the fund's assets effectively; the administrator maintains records, calculates vesting, and tracks account values. Once the company formally adopts the ESOP and the related trust documents, it submits them to the IRS. The IRS then determines whether the ESOP will receive a tax-qualified status.

ESOPs must meet several requirements of the Internal Revenue Code and the Employee Retirement Income Security Act of 1974 (ERISA) to become a qualified retirement plan. There are four major tax benefits associated with these plans:

- Employers can deduct plan contributions (up to a limit).
- Employees can defer taxes on the contributions and their earnings until they withdraw their funds (if the ESOP owns at least 30% of the company's stock after the sale and the seller reinvests the proceeds in certain investments).
- Employers do not pay taxes on the ESOP's earnings and dividends while those earnings are in the fund.
- Employees and their beneficiaries can often transfer ESOP balances into other tax-deferred vehicles, such as IRAs, to further postpone taxation.

ESOP contributions must vest at least 20% per year. Participants have the right to diversify some of their holdings when they meet certain requirements, including length of participation and age. When an employee leaves the company, they receive their balance either in shares or in cash.

Privately-held companies with ESOPs have a repurchase obligation to departing employees, meaning that the employer must purchase the employee's ESOP shares within 60 days of the employee's departure from the company. Over time, this obligation can become quite large (especially if the stock price increases substantially), and companies must ensure that they will have enough cash to meet their obligations.

WHY IT MATTERS:

Most companies create *employee stock ownership plans* to provide the motivation, inspiration, and retention associated with ownership. Like other defined contribution plans, the ultimate benefit to the employee depends on the amount contributed and the performance of the investments in the fund. ESOP participants and sponsors can enjoy some unique tax advantages, but ESOPs also tend to bear more risk than other defined contribution plans, such as 401(k)s, because they generally do not diversify their holdings. Also, businesses often use ESOPs as collateral to obtain financing for acquisitions and other activities. Additionally, when ESOPs issue new shares they can dilute existing shareholder wealth.

FLEXI-TIME

Flexi-time (or flextime, flexi-time, originally derived from the German word Gleitzeit which literally means "sliding time") is a variable work schedule, in contrast to traditional work arrangements requiring employees to work a standard 9 a.m. to 5 p.m. day. Its invention is usually credited to William Henning. Under flextime, there is typically a core period (of approximately 50% of total working time/working day) of the day, when employees are expected to be at work (for example, between 11 a.m. and 3 p.m.), while the rest of the working day is "flexitime", in which employees can choose when they work, subject to achieving total daily, weekly or monthly hours in the region of what the employer expects, and subject to the necessary work being done.

A flextime policy allows staff to determine when they will work, while a flexplace policy allows staff to determine where they will work. Its practical realization can mainly be attributed to the entrepreneur Wilhelm Haller who founded Hengstler Gleitzeit, and later "Interflex Datensysteme GmbH" in Southern Germany, where today a number of companies offer Flexitime (Gleitzeit) solutions which have grown out of his initiative

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Flexitime, also known as flexi-time, flex time, flex scheduling or the implementation of a flexi system, is where an organisation offers its employees the opportunity of availing of a flexible working hours arrangement.
A flexitime system is designed to offer employees more flexibility in the workplace by giving them the flexibility to start and finish work at times that suit their transport arrangements, family responsibilities etc.

- Pre flexi arrival – 04.00 to 07.00
- Flexi arrival – 07.00 to 10.00
- Core time a.m. – 10.00 to 12.30
- Flexi lunch – 12.30 to 14.30 (min 30 mins / max 2 hrs)
- Core time p.m. – 14.30 to 16.00
- Flexi leave – 16.00 to 18.30

An employee is obliged to work between the basic core hours and has the flexibility to clock in / out between the other hours. The idea is that employees have a bank of hours that are credited or debited to the employer over an accounting period of say, four weeks. In most organisations where flexitime is in place, employees can work a debit or credit of hours which will be (a) worked in the following month in the case of a debit or (b) be taken as flexi leave (in the following month) in the case of a credit or be allocated as overtime if such policy exists.

QUALITY CIRCLE

Quality Circles are (informal) groups of employees who voluntarily meet together on a regular basis to identify, define, analyze and solve work related problems. Usually the members of a particular team (quality circle) should be from the same work area or who do similar work so that the problems they select will be familiar to all of them. In addition, interdepartmental or cross functional quality circles may also be formed. An ideal size of quality circle is seven to eight members. But the number of members in a quality circle can vary.

Objectives of Quality Circles

- Promote job involvement
- Create problem solving capability
- Improve communication
- Promote leadership qualities
- Promote personal development
- Develop a greater awareness for cleanliness
- Develop greater awareness for safety
- Improve morale through closer identity of employee objectives with organization's objectives
- Reduce errors.
- Enhance quality
- Inspire more effective team work

KAIZEN

Kaizen was created in Japan following World War II. The word Kaizen means "continuous improvement". It comes from the Japanese words 改 ("kai") which means "change" or "to correct" and 善 ("zen") which means "good".

Kaizen is a system that involves every employee - from upper management to the cleaning crew. Everyone is encouraged to come up with small improvement suggestions on a regular basis. This is not a once a month or once a year activity. It is continuous. Japanese companies, such as Toyota and Canon, a total of 60 to 70 suggestions per employee per year are written down, shared and implemented.

In most cases these are not ideas for major changes. Kaizen is based on making little changes on a regular basis: always improving productivity, safety and effectiveness while reducing waste.

Suggestions are not limited to a specific area such as production or marketing. Kaizen is based on making changes anywhere that improvements can be made. Western philosophy may be summarized as, "if it ain't broke, don't fix it." The Kaizen philosophy is to "do it better, make it better, and improve it even if it isn't broken, because if we don't, we can't compete with those who do."

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Kaizen is a Japanese word for 'continuous improvement.' Kaizen methods can be used to improve the results of any firm and can also be used in your personal life. Read on to learn the what, how and why of kaizen.

How Do You Implement *Kaizen*?

It's important to note that *kaizen* is a way of thinking, not a project to complete. To implement it, all employees should receive training on the concept of *kaizen* and should have some guidelines in terms of what they need to do before implementing a change. For example, it may be fine for an office worker to change his or her handling of paperwork without any discussion. A change in the production process, though, may impact multiple teams and should be discussed with all impacted parties before implementation. In addition, most production steps will be subject to safety regulations and will have detailed documentation on accurate performance, and these need to be in place before a change is made.

It's also important that management is trained and be behind the effort. *Kaizen* will result in many more suggestions for improvements and changes and will take away from a rigid focus on moving items quickly through the existing production process. Management must be ready to accept some time away from current work to focus on changes with longer-range impact.

TOTAL QUALITY MANAGEMENT

Total quality management or TQM is an integrative philosophy of management for continuously improving the quality of products and processes.
TQM functions on the premise that the quality of products and processes is the responsibility of everyone who is involved with the creation or consumption of the products or services offered by an organization. In other words, TQM capitalizes on the involvement of management, workforce, suppliers, and even customers, in order to meet or exceed customer expectations. Considering the practices of TQM as discussed in six empirical studies, Cua, McKone, and Schroeder (2001) identified the nine common TQM practices as cross-functional product design, process management,

supplier quality management, customer involvement, information and feedback, committed leadership, strategic planning, cross-functional training, and employee involvement.

Total Quality Management Principles: The 8 Primary Elements of TQM

Total quality management can be summarized as a management system for a customer-focused organization that involves all employees in continual improvement. It uses strategy, data, and effective communications to integrate the quality discipline into the culture and activities of the organization. Many of these concepts are present in modern Quality Management Systems, the successor to TQM. Here are the 8 principles of total quality management:

1. Customer-focused

The customer ultimately determines the level of quality. No matter what an organization does to foster quality improvement—training employees, integrating quality into the design process, upgrading computers or software, or buying new measuring tools—the customer determines whether the efforts were worthwhile.

2. Total employee involvement

All employees participate in working toward common goals. Total employee commitment can only be obtained after fear has been driven from the workplace, when empowerment has occurred, and management has provided the proper environment. High-performance work systems integrate continuous improvement efforts with normal business operations. Self-managed work teams are one form of empowerment.

3. Process-centered

A fundamental part of TQM is a focus on process thinking. A process is a series of steps that take inputs from suppliers (internal or external) and transforms them into outputs that are delivered to customers (again, either internal or external). The steps required to carry out the process are defined, and performance measures are continuously monitored in order to detect unexpected variation.

4. Integrated system

Although an organization may consist of many different functional specialties often organized into vertically structured departments, it is the horizontal processes interconnecting these functions that are the focus of TQM.

Micro-processes add up to larger processes, and all processes aggregate into the business processes required for defining and implementing strategy. Everyone must understand the vision, mission, and guiding principles as well as the quality policies, objectives, and critical processes of the organization. Business performance must be monitored and communicated continuously.

An integrated business system may be modeled after the Baldrige National Quality Program criteria and/or incorporate the ISO 9000 standards. Every organization has a unique work culture, and it is virtually impossible to achieve excellence in its products and services unless a good quality culture has been fostered. Thus, an integrated system connects business improvement elements in an attempt to continually improve and exceed the expectations of customers, employees, and other stakeholders.

5. Strategic and systematic approach

A critical part of the management of quality is the strategic and systematic approach to achieving an organization’s vision, mission, and goals. This process, called strategic planning or strategic management, includes the formulation of a strategic plan that integrates quality as a core component.

6. Continual improvement

A major thrust of TQM is continual process improvement. Continual improvement drives an organization to be both analytical and creative in finding ways to become more competitive and more effective at meeting stakeholder expectations.

7. Fact-based decision making

In order to know how well an organization is performing, data on performance measures are necessary. TQM requires that an organization continually collect and analyze data in order to improve decision making accuracy, achieve consensus, and allow prediction based on past history.

8. Communications

During times of organizational change, as well as part of day-to-day operation, effective communications plays a large part in maintaining morale and in motivating employees at all levels. Communications involve strategies, method, and timeliness.

SIX SIGMA

Six Sigma seeks to improve the quality of process outputs by identifying and removing the causes of defects (errors) and minimizing variability in manufacturing and business processes. It uses a set of quality management methods, including statistical methods, and creates a special infrastructure of people within the organization ("Black Belts", "Green Belts", etc.) who are experts in these methods. Each Six Sigma project carried out within an organization follows a defined sequence of steps and has quantified financial targets (cost reduction and/or profit increase).

The term Six Sigma originated from terminology associated with manufacturing, specifically terms associated with statistical modeling of manufacturing processes. The maturity of a manufacturing process can be described by a sigma rating indicating its yield, or the percentage of defect-free products it creates. A six sigma process is one in which 99.99966% of the products manufactured are statistically expected to be free of defects (3.4 defects per million). Motorola set a goal of "six sigma" for all of its manufacturing operations, and this goal became a byword for the management and engineering practices used to achieve it.

Six Sigma Defined The term "Six Sigma" is widely used to refer to all of the following:

- A structured method for improving business processes. This method, called DMAIC (Define, Measure, Analyze, Improve, Control), is supported by an assortment of statistical tools.
- A statistical measurement of how well a business process is performing. A process that performs at "Six Sigma" produces only 3.4 defects out of every million opportunities to produce a defect. Processes that perform at lower sigma levels (such as one sigma or four sigma) produce more defects per million opportunities. It is possible for a process to perform at an even higher level (and thus have even fewer defects), but Six Sigma has become popular as the standard for excellent process performance.
- An organizational mindset in which people make decisions based on data, look for root causes of problems, define defects based on customer rather than internal requirements, seek to control variation, track leading indicators of problems to prevent them from happening, etc.

Six Sigma Roles

Six Sigma has a martial arts convention for naming many of its professional roles. The chart below describes how these roles are typically defined.

Six Sigma Roles And Responsibilities	
Sponsor	Senior executive who sponsors the overall Six Sigma Initiative.
Leader	Senior-level executive who is responsible for implementing Six Sigma within the business.
Champion	Middle- or senior-level executive who sponsors a specific Six Sigma project, ensuring that resources are available and cross-functional issues are resolved.
Black Belt	Full-time professional who acts as a team leader on Six Sigma projects. Typically has four to five weeks of classroom training in methods, statistical tools, and (sometimes) team skills.
Master Black Belt	Highly experienced and successful Black Belt who has managed several projects and is an expert in Six Sigma methods/tools. Responsible for coaching/mentoring/training Black Belts and for helping the Six Sigma leader and Champions keep the initiative on track.
Green Belt	Part-time professional who participates on a Black Belt project team or leads smaller projects. Typically has two weeks of classroom training in methods and basic statistical tools.
Team Member	Professional who has general awareness of Six Sigma (through no formal training) and who brings relevant experience or expertise to a particular project.
Process Owner	Professional responsible for the business process that is the target of a Six Sigma project.

Leaders and Champions usually receive high-level training on the technical aspects of Six Sigma and specific training on how to lead an initiative. At the "Belt" level, each candidate is assigned an initial "training project" that he/she will work on during the formal training period. Candidates attend classroom training for a week, work on their projects for three weeks, return to class for another week, and so on until they have acquired all the skills appropriate to their role.

HR's Role in Six Sigma

As with any major organizational initiative, many factors contribute to success. Some of these factors will fall within HR's area of responsibility, such as those discussed below.

Black Belt Selection and Retention

Having the right people in the Black Belt role is critical to the success of a Six Sigma initiative. The training investment is substantial for this pivotal role. Further, Black Belts are the visible "face" of Six Sigma. They help shape the organization's impression of Six Sigma, and, consequently, the willingness of many to embrace the initiative. Therefore, you want to pick Black Belts very carefully. (Some organizations only select Black Belts from among those who have already been identified as "high potentials.")

HR professionals can help the Six Sigma Leader find the right people for Black Belt roles and ensure they remain in those positions for the typical two-year rotation. Potential HR contributions in this area include:

- Building a competency model that will help identify candidates with the right mix of technical, team, and leadership skills and abilities.
- Creating job descriptions that help candidates fully understand the position and expectations prior to signing on.
- Developing a retention strategy that will help ensure Black Belts complete their rotation and the organization recoups its investment in training and development.

Rewards and Recognition

Rewarding and recognizing Black Belts and Six Sigma teams is more complex than it may appear. Black Belts join the Six Sigma initiative from various places in the organization where they are likely to have been at different job levels with differing compensation arrangements. Determining whether and how to make appropriate adjustments in level and compensation now that all these individuals are in the same role is both tricky and critical.

Similar complexities are involved at the project team level. Six Sigma projects led by Black Belts typically result in savings in the hundreds of thousands of dollars. Deciding how the team should be rewarded and recognized and who should get credit for what is not easy. Yet ignoring these issues can result in resentment, reluctance to work on Six Sigma projects, and the potential failure of the overall initiative.

HR professionals can help the Six Sigma Leader tackle the challenge of establishing the right rewards/recognition. Potential HR contributions in this area include:

- Analyzing existing compensation arrangements to identify the extent to which those arrangements will support the Six Sigma initiative.
- Creating a strategic compensation plan that will better support Six Sigma.
- Developing a non-monetary reward program for Six Sigma teams.

Project Team Effectiveness

The work of Six Sigma is done mostly at the project team level by a Black Belt leading a small team through the steps of the DMAIC method. If the team itself does not function well or does not interact effectively with others in the organization who ultimately have to support and carry out the process changes, the project probably will not be successful. Given the typical project's potential payback, failure can be expensive.

HR professionals can help the project teams work together more effectively. Potential HR contributions in this area include:

- Ensuring team leaders and members get training and/or coaching in teamwork, conflict management, communications, dealing with difficult team members, and other team effectiveness skills.
- Providing teams with tools that allow them to diagnose their own performance and identify when and where they need help.
- Acting as a resource for Black Belts who encounter team-related challenges they cannot surmount.

Creating a Six Sigma Culture

Many Sponsors, Champions, and Leaders look to Six Sigma as a way to change an organization's culture to one that is more data-driven, proactive, decisive, and customer-oriented. But they often have little idea about how to achieve successful culture change.

HR professionals can help executives approach culture change in a way that addresses the underlying business goals without creating organizational resistance. Potential HR contributions in this area include:

- Working with Six Sigma Sponsors, Leaders, and Champions to identify elements of the culture that might hinder the achievement of Six Sigma goals.
- Advising on change plans that will target those specific cultural elements.
- Identifying how Six Sigma can be rolled out in a way that works with, rather than against, the current culture.

Change Management and Communications

Introducing Six Sigma into an organization is a major change that will have a profound effect on a broad group of stakeholders. Managers and employees at many levels of the organization will be asked to engage in new behaviors. In many cases, those leading other initiatives will see Six Sigma as a source of competition for resources, executive attention, and organizational power. Others may see it as an indictment of their past performance. Many will be confused about how Six Sigma fits with the large number of other ongoing organizational initiatives.

HR professionals can help reduce the uncertainty and anxiety surrounding Six Sigma and increase the levels of acceptance and cooperation in the organization. Potential HR contributions in this area include:

- Drafting a change management/ communications plan that addresses the people side of the Six Sigma rollout.

- Helping create a “case for change” that describes:
- The reasons for and benefits of Six Sigma.
- How the organization will help employees succeed in new ways of working.
- How Six Sigma fits with other ongoing initiatives.
- Counseling Six Sigma Leaders and Champions on how their behavior can help or hinder Six Sigma’s acceptance throughout the organization.

Being Included in Six Sigma

Just because HR professionals can play a role in the success of Six Sigma, it doesn’t automatically follow that they will be asked to participate. Unless you are in an organization that views HR as a partner in all business initiatives, you may have to push to be included in Six Sigma.

HR can greatly increase its chances of being included in the Six Sigma initiative by:

- Ensuring HR professionals have the right skills and knowledge.
- Marketing its potential contribution early in the initiative.

Gaining the Right Skills and Knowledge

In addition to HR/organizational development-related areas, HR professionals need a familiarity with Six Sigma itself. Without a basic knowledge of the DMAIC method, supporting tools, roles, jargon, and even simple statistical methods, HR will not have the credibility it needs to be considered a potential contributor to the initiative.

The time to get this knowledge is now. Even if your organization is not rolling out – or even considering – Six Sigma today, there are two reasons why it is worth a HR professional’s time to become familiar with the concepts now. If the organization does decide to implement Six Sigma, there won’t be enough time to catch up. HR has to be involved at the very beginning of the initiative. In addition, there are many applications of Six Sigma to HR’s processes themselves, e.g., the payroll process, benefits administration, selection, and recruiting. HR might even consider setting an example for the rest of the organization by adopting Six Sigma techniques to enhance its own processes.

Marketing HR’s Potential Contribution

The marketing challenge is twofold. First, senior executives may not believe that the people issues are just as critical to Six Sigma’s success as are its many technical components. In that case, HR will need to sell the importance of the people side. Second, executives must perceive HR as being able to make a significant contribution on the people side of Six Sigma. Besides ensuring that it has both the required skills and knowledge described above, HR can also meet these challenges by:

- Gathering data that supports the need for attention to the people side of Six Sigma. Potential sources include Six Sigma publications, case studies, conference sessions, and executives in companies that have already implemented Six Sigma.

- Deriving lessons from previous organizational initiatives in which people issues and/or HR actions played an acknowledged role in success or failure.
- Meeting with senior executives to discuss their business/Six Sigma goals and then identifying areas where HR could provide very specific and measurable help.
- Speaking to Six Sigma Leaders and Champions in the language of Six Sigma, not the language of HR. These executives are typically interested in improving efficiency (i.e., internal cost) and effectiveness (i.e., what the customer sees as "defects"). HR needs to understand what the executives care about and pitch HR's services in relevant terms.
- Taking the lead and applying Six Sigma successfully within the HR function.

HR has a substantial role to play in the success of a Six Sigma initiative. But it will have the opportunity to contribute only if its professionals have the right skills and knowledge and are able to show Six Sigma executives the value they can add. Gain those skills now and make sure senior leadership knows how HR can help support the success of the initiative. Only then will they realize they just cannot do it without you!

Unit II

Acquisition of Human Resources

HR Planning refers to classic HR administrative functions, and the evaluation and identification of human resources requirements for meeting organizational goals. It also requires an assessment of the availability of the qualified resources that will be needed. To ensure their competitive advantage in the marketplace and anticipate staffing needs, organizations must implement innovative strategies that are designed to enhance their employee retention rate and recruit fresh talent into their companies. Human resources planning is one way to help a company develop strategies and predict company needs in order to keep their competitive edge.

Definition: Job Analysis

A job analysis is the process used to collect information about the duties, responsibilities, necessary skills, outcomes, and work environment of a particular job. You need as much data as possible to put together a job description, which is the frequent outcome of the job analysis. Additional outcomes include recruiting plans, position postings and advertisements, and performance development planning within your performance management system.

The job analysis may include these activities

- reviewing the job responsibilities of current employees,
- doing Internet research and viewing sample job descriptions online or offline highlighting similar jobs,
- analyzing the work duties, tasks, and responsibilities that need to be accomplished by the employee filling the position,
- researching and sharing with other companies that have similar jobs, and
- Articulation of the most important outcomes or contributions needed from the position.

JOB DESCRIPTION AND JOB SPECIFICATION

Job descriptions describe the job and not the individual who fills the job. They are the result of job analysis within a given organization and are essential to the selection and evaluation of employees. Job advertisements or postings are based on the job description.

The character of the organization is the basis for the description of positions. Information about the organization might include

- Name of Company
- Main Product(s) and/or Service(s)
- Location
- Number of Employees
- Company Structure
- Names of Officers
- Hours of Work

JOB ANALYSIS

Job analysis is the systematic assembly of all the facts about a job. The purpose is to study the individual elements and duties. All information related to the salary and benefits, working hours and conditions, typical tasks and responsibilities are required for the job analysis. The results of job analysis are job description and job specification. Is the systematic assembly of all the facts about a job. The purpose is to study the individual elements and duties. All information related to the salary and benefits, working hours and conditions, typical tasks and responsibilities are required for the job analysis. The results of job analysis are job description and job specification.

JOB DESCRIPTION

Job description is a written statement that defines the duties, relationships and results expected of anyone in the job. It is an overall view of what is to be done in the job. Typically it includes is a written statement that defines the duties, relationships and results expected of anyone in the job. It is an overall view of what is to be done in the job. Typically it includes

Job Title
- Date

Title of immediate supervisor
- Statement of the Purpose of the Job
- Primary Responsibilities
- List of Typical Duties and Responsibilities
- General Information related to the job

- Training requirements
- Tool use
- Transportation
- Signature of the person who has prepared the job description

JOB SPECIFICATION

-

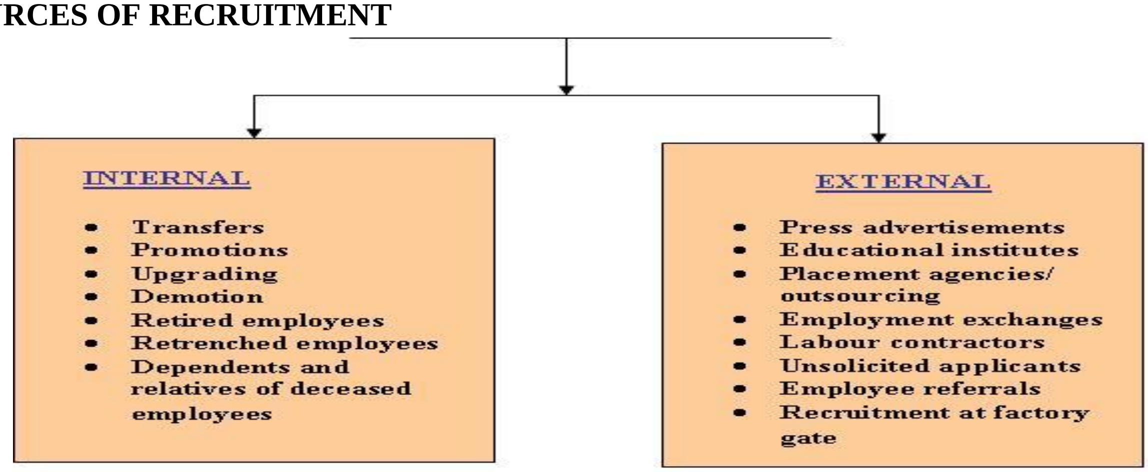
Job Specification is an analysis of the kind of person it takes to do the job, that is to say, it lists the qualifications. Normally, this would include is an analysis of the kind of person it takes to do the job, that is to say, it lists the qualifications. Typically this would include

Degree of education

- Desirable amount of previous experience in similar work
- Specific Skills required
- Health Considerations

The recruitment and selection is the major function of the human resource department and recruitment process is the first step towards creating the competitive strength and the strategic advantage for the organisations. Recruitment process involves a systematic procedure from sourcing the candidates to arranging and conducting the interviews and requires many resources and time.

SOURCES OF RECRUITMENT



A general **Recruitment process** is as follows:

1. Identifying the vacancy:

The recruitment process begins with the human resource department receiving requisitions for recruitment from any department of the company. These contain:

Posts to be filled

- Number of persons
- Duties to be performed
- Qualifications required
- Preparing the job description and person specification.
- Locating and developing the sources of required number and type of employees (Advertising etc).
- Short-listing and identifying the prospective employee with required characteristics.
- Arranging the interviews with the selected candidates.
- Conducting the interview and decision making

Every organization has the option of choosing the candidates for its recruitment processes from two kinds of sources: internal and external sources. The sources within the organization itself (like transfer of employees from one department to other, promotions) to fill a position are known as the internal sources of recruitment. Recruitment candidates from all the other sources (like outsourcing agencies etc.) are known as the external sources of recruitment.

Employee Selection is the process of putting right men on right job. It is a procedure of matching organizational requirements with the skills and qualifications of people. Effective selection can be done only when there is effective matching. By selecting best candidate for the required job, the organization will get quality performance of employees. Moreover, organization will face less of absenteeism and employee turnover problems. By selecting right candidate for the required job, organization will also save time and money. Proper screening of candidates takes place during selection procedure. All the potential candidates who apply for the given job are tested.

T**he Employee Selection Process takes place in following order-**

A. Preliminary Interviews- It is used to eliminate those candidates who do not meet the minimum eligiblity criteria laid down by the organization. The skills, academic and family background, competencies and interests of the candidate are examined during preliminary interview. Preliminary interviews are less formalized and planned than the final interviews. The candidates are given a brief up about the company and the job profile; and it is also examined how much the candidate knows about the company. Preliminary interviews are also called screening interviews.

B. Application blanks- The candidates who clear the preliminary interview are required to fill application blank. It contains data record of the candidates such as details about age, qualifications, reason for leaving previous job, experience, etc.

C. Written Tests- Various written tests conducted during selection procedure are aptitude test, intelligence test, reasoning test, personality test, etc. These tests are used to objectively assess the potential candidate. They should not be biased.

D. Employment Interviews- It is a one to one interaction between the interviewer and the potential candidate. It is used to find whether the candidate is best suited for the required job or not. But such interviews consume time and money both. Moreover the competencies of the candidate cannot be judged. Such interviews may be biased at times. Such interviews should be conducted properly. No distractions should be there in room. There should be an honest communication between candidate and interviewer.

E. Medical examination- Medical tests are conducted to ensure physical fitness of the potential employee. It will decrease chances of employee absenteeism.

F. Appointment Letter- A reference check is made about the candidate selected and then finally he is appointed by giving a formal appointment letter.

TYPE OF TESTS TAKEN IN THE SELECTION PROCESS

The following are the type of tests taken:

1). Ability tests:

Assist in determining how well an individual can perform tasks related to the job. An excellent illustration of this is the typing tests given to a prospective employer for secretarial job. Also called as 'ACHEIVEMENT TESTS'. It is concerned with what one has accomplished. When applicant claims to know something, an achievement test is taken to measure how well they know it. Trade tests are the most common type of achievement test given. Questions have been prepared and tested for such trades as asbestos worker, punch-press operators, electricians and machinists. There are, of course, many unstandardized achievement tests given in industries, such as typing or dictation tests for an applicant for a stenographic position.

2). Aptitude test:

Aptitude tests measure whether an individuals has the capacity or latent ability to learn a given job if given adequate training. The use of aptitude test is advisable when an applicant has had little or no experience along the line of the job opening. Aptitudes tests help determine a person's potential to learn in a given area. An example of such test is the general management aptitude tests (GMAT), which many business students take prior to gaining admission to a graduate business school programme.

Aptitude test indicates the ability or fitness of an individual to engage successfully in any number of specialized activities. They cover such areas clerical aptitude, numerical aptitude, mechanical aptitude, motor co-ordination, finger dexterity and manual dexterity. These tests help to detect positive negative points in a person's sensory or intellectual ability. They focus attention on a particular type of talent such as learning or reasoning in respect of a particular field of work.

Forms of aptitude test:

- **Mental or intelligence tests:** They measure the overall intellectual ability of a person and enable to know whether the person has the mental ability to deal with certain problems.

- **Mechanical aptitude tests:** They measure the ability of a person to learn a particular type of mechanical work. These tests helps to measure specialized technical knowledge and problem solving abilities if the candidate. They are useful in selection of mechanics, maintenance workers, etc.
- **Psychomotor or skills tests:** They are those, which measure a person's ability to do a specific job. Such tests are conducted in respect of semi- skilled and repetitive jobs such as packing, testing and inspection, etc.

3). Intelligence test:

This test helps to evaluate traits of intelligence. Mental ability, presence of mind (alertness), numerical ability, memory and such other aspects can be measured. The intelligence is probably the most widely administered standardized test in industry. It is taken to judge numerical, skills, reasoning, memory and such other abilities.

4). Interest Test:

This is conducted to find out likes and dislikes of candidates towards occupations, hobbies, etc. such tests indicate which occupations are more in line with a person's interest. Such tests also enable the company to provide vocational guidance to the selected candidates and even to the existing employees. These tests are used to measure an individual's activity preferences. These tests are particularly useful for students considering many careers or employees deciding upon career changes.

5). Personality Test:

The importance of personality to job success is undeniable. Often an individual who possesses the intelligence, aptitude and experience for certain has failed because of inability to get along with and motivate other people. It is conducted to judge maturity, social or interpersonal skills, behavior under stress and strain, etc. this test is very much essential on case of selection of sales force, public relation staff, etc. where personality plays an important role. Personality tests are similar to interest tests in that they, also, involve a serious problem of obtaining an honest answer.

6). Projective Test:

This test requires interpretation of problems or situations. For example, a photograph or a picture can be shown to the candidates and they are asked to give their views, and opinions about the picture.

7). General knowledge Test:

Now days G.K. Tests are very common to find general awareness of the candidates in the field of sports, politics, world affairs, current affairs.

8). Perception Test:

At times perception tests can be conducted to find out beliefs, attitudes, and mental sharpness etc.

9). Graphology Test:

It is designed to analyze the handwriting of individual. It has been said that an individual's handwriting can suggest the degree of energy, inhibition and spontaneity, as well as disclose the idiosyncrasies and elements of balance and control. For example, big letters and emphasis on capital letters indicate a tendency towards domination and competitiveness. A slant to the right, moderate pressure and good legibility show leadership potential.

10). Polygraph Test:

Polygraph is a lie detector, which is designed to ensure accuracy of the information given in the applications. Department store, banks, treasury offices and jewellery shops, that is, those highly vulnerable to theft or swindling may find polygraph tests useful.

11). Medical Test:

It reveals physical fitness of a candidate. With the development of technology, medical tests have become diversified. Medical servicing helps measure and monitor a candidate's physical resilience upon exposure to hazardous chemicals.

INTERVIEW: DEFINITION, OBJECTIVES, TYPES AND GUIDELINES FOR EFFECTIVE INTERVIEW

Definition:

Interview is the widely used (election method. It is a face-to-face interaction between interviewee and interviewer. If handled carefully, it can be a powerful technique in having accurate information of the interviewee otherwise unavailable. At the same time, if the interview is not handled carefully, it can be a source of bias, restricting or distorting the flow of communication.

Different scholars have defined 'interview' differently. According to Scott and others, "an interview is a purposeful exchange of ideas, the answering of questions and communication between two or more persons". Bingham and others define an interview as a 'conversation with a purpose".

Thus, interview can be defined as an attempt to secure maximum amount of information from the candidate concerning his/her suitability for the job under consideration.

It tries to achieve an accurate appraisal of the applicant in terms of his/her educational qualification, training, family background, previous work experience and judge the applicant's certain qualities like manners, appearance, conversational ability, meet other people pleasantly, etc.

Objectives of Interview:

In the selection process, interview serves the following objectives:

1. Verifies the information obtained through application form and tests.

2. Helps obtain additional information from the applicant otherwise not available.

3. Gives the candidate necessary facts and information about the job and the organisation.

4. Helps establish mutual understanding between the company and the candidate and build the company's image.

According to Richard Calhoon, employment interview serves the following three objectives:

First, it is the only way to see an applicant in action – how he looks, his manner, his bearing.

Second, it is the only way to witness how he interacts and how he responds, his way of thinking, the effect of his personality on others.

Third, it is perhaps the best way to get at the 'will do' features of a performance- motivation, initiative, stability, perseverance, work, habits and judgments.

Types of Interviews:

Four types of interviews for selection have been identified.

These are:

1. Preliminary Interview:

The interviews conducted to screen the applicants to decide whether further detailed interview will be required are called preliminary interviews. The candidate is given freedom by giving job details during the interview to decide whether the job will suit him.

One of the drawback associated with the preliminary interview is that it might lead to the elimination of many desirable candidates in case interviewers do not have much and proper experience in evaluating candidates. The positive argument, if any, for this method is that it saves time and money for the company.

2. Patterned Interview:

In this interview, the pattern of the interview is decided in advance. What kind of information is to be sought or given, how the interview is to be conducted, and how much time is to be allotted to it, all these are worked out in advance. In case interviewee drifts, he/she is swiftly guided back to the structured questions. Such interviews are also called standardised interviews.

3. Depth Interview:

As the term itself implies, depth interview tries to portray the interviewee in depth and detail. It, accordingly, covers the life history of the applicant along with his/her work experience, academic qualifications, health, attitude, interest, and hobbies. This method is particularly suitable for executive selection. Expectedly, depth interview involves more time and money in conducting it.

4. Stress Interview:
Such interviews are conducted for the jobs which are to be performed under stressful conditions. The objective of stress interview is to make deliberate attempts to create stressful or strained conditions for the interviewee to observe how the applicant behaves under stressful conditions.

The common methods used to induce stress include frequent interruptions, keeping silent for an extended period of time, asking too many questions at a time, making derogatory remarks about the candidate, accusing him that he is lying and so on. The purpose is to observe how the candidate behaves under the stressful conditions – whether he looses his temper, gets confused or frightened.

However, stress-inducing must be done very carefully by trained and skilled interviewer otherwise it may result in dangers. Emotionally charged candidates must not be subjected to further stressful conditions. The candidate should be given sufficient chance to cope with such induced stress before he leaves.

Limitations of Interview:
Research studies have firmly established that, among all selection methods, interview has been the most researched and carefully documented method.

However, interview suffers from some limitations also.

1. Interviewers may not have a clearly defined technique developed. This results in lack of validity in evaluation of the candidate.

2. There is always variation in offering scoring points to the candidate by the interviewers.

3. Interview can help judge the personality of the candidate but not his ability for the job.

4. A single characteristic of the candidate found out on the basis of interview, may affect the judgment of the interviewer on other qualities of the applicant. This is called ‘halo effect’.

5. The biases of interviewers may cloud the objectivity of interview.

6. Finally, interview is a time consuming and expensive device of selection.

The above listed limitations or defects in interview underline the need for observing certain guidelines to make interviews more effective.

Guidelines for Effective Interviewing:
Below are given some guidelines, if observed, can make interview more effective:

1. The interview should have a definite time schedule known to both the interviewers and the interviewee.

2. Interview should be conducted by the competent, trained and experienced interviewers.

3. The interviewers should be supplied with specific set of guidelines for conducting interview.

4. The interviewers should ensure an element of privacy for the interviewee.

5. A resume for all the candidates to be interviewed should be prepared and the same be made available to the interviewers before the interview starts.

6. The interview should not end abruptly but it should come to close tactfully providing satisfaction to the interviewee.

7. The interviewers should show their sensitivity to the interviewee s sentiments and also sympathetic attitude to him/her.

8. The interviewers should also evince emotional maturity and a stable personality during the interview session.

DIFFERENCE BETWEEN RECRUITMENT AND SELECTION

Selection must be differentiated from recruitment, though these are two phases of employment process. Recruitment is considered to be a positive process as it motivates more of candidates to apply for the job. It creates a pool of applicants. It is just sourcing of data. While selection is a negative process as the inappropriate candidates are rejected here. Recruitment precedes selection in staffing process. Selection involves choosing the best candidate with best abilities, skills and knowledge for the required job.

Placement is a process of assigning a specific job to each of the selected candidates. It involves assigning a specific rank and responsibility to an individual. It implies matching the requirements of a job with the qualifications of the candidate.

The significances of Placement are as follows: -

* It improves employee morale.

* It helps in reducing employee turnover.

* It helps in reducing absenteeism.

* It helps in reducing accident rates.

* It avoids misfit between the candidate and the job.

* It helps the candidate to work as per the predetermined objectives of the organization.

Induction

Once an employee is selected and placed on an appropriate job, the process of familiarizing him with the job and the organization is known as induction. Induction is the process of receiving and welcoming an employee when he first joins the company and giving him basic information he needs to settle down quickly and happily and stars work.

The Objectives of Induction

Induction is designed to achieve following objectives: -

* To help the new comer to overcome his shyness and overcome his shyness nervousness in meeting new people in a new environment.

* To give new comer necessary information such as location of a café, rest period etc.

* To build new employee confidence in the organization.

* It helps in reducing labor turnover and absenteeism.

* It reduces confusion and develops healthy relations in the organization.

* To ensure that the new comer do not form false impression and negative attitude towards the organization.

* To develop among the new comer a sense of belonging and loyalty to the organization.

The Advantages of formal induction

* Induction helps to build up a two-way channel of communication between management and workers.

* Proper induction facilitates informal relation and team work among employee.

* Effective induction helps to integrate the new employee into the organization and to develop a sense of belonging.

* Induction helps to develop good relation.

* A formal induction programme proves that the company is taking interest in getting him off to good start.

* Proper induction reduces employee grievances, absenteeism and labor turnover.

* Induction is helpful in supplying information concerning the organization, the job and employee welfare facilities.

The contents of Induction programme

* Brief history and operations of the company.

* The company’s organization structure.

* Policies and procedure of the company.

* Products and services of the company.

* Location of department and employee facilities.

* Safety measures.

* Grievances procedures.

* Benefits and services of employee.

* Standing orders and disciplinary procedures.

* Opportunities for training, promotions transfer etc.

* Suggestion schemes.

* Rules and regulations.

JOB CHANGES

Transfers and Job rotation

Transfers and job rotation are forms of enlargement entailing movement from one job to another of comparable responsibility. Transfers usually last for a longer term while job rotation may imply several short term job changes. In addition, some rotations are cyclical and involve going through the same set of jobs over and over.

In a dairy, for instance, workers may be part of a job rotation cycle from milking to cow feeding to calf feeding. Besides alleviating possible boredom, transfers and job rotations expose workers to more tasks. When an absence or turnover occurs, it helps to have other knowledgeable employees who can perform the vacated job.

Morale can suffer when transfers require employees to relocate. A raise in pay may help. Relocations, although not common in farming, can be particularly trying in homes where both husband and wife work. Some organizations requiring relocation may offer assistance to the other working spouse in finding a job in the new community. International assignments carry unique challenges and opportunities.

A **Promotion** is the advancement of an employee's rank or position in an organizational hierarchy system. Promotion may be an employee's reward for good performance i.e. positive appraisal. Before a company promotes an employee to a particular position it ensures that the person is able to handle the added responsibilities by screening the employee with interviews and tests and giving them training or on-the-job experience. A promotion can involve advancement in terms of designation, salary and benefits, and in some organizations the type of job activities may change a great deal.

A **Demotion** is a compulsory reduction in an employee's rank or job title within the organizational hierarchy of a company, public service department, or other body. A demotion may also lead to the loss of other privileges associated with a more senior rank and/or a reduction in salary or benefits.

An employee may be demoted for violating the rules of the organization by a behavior such as excessive lateness, misconduct, or negligence. In some cases, an employee may be demoted as an alternative to being laid off, if the employee has poor job performance or if the company is facing a financial crisis. A move to a position at the same rank or level elsewhere in the organization is called a lateral move or deployment. A voluntary move to a lower level is also a deployment as it is not a compulsory reduction in level.

Separations

Employee separation is a sensitive issue for any organization. Usually, an employee leaves the organization after several years of service. Thus, the permanent separation of employees from an organization requires discretion, empathy and a great deal of planning. An employee may be separated as consequence of resignation, removal, death, permanent incapacity, discharge or retirement. The employee may also be separated due to the expiration of an employment contract or as part of downsizing of the workforce. Organizations should never harass the employees, especially in the case of resignation, just because they are quitting the organization. In fact, a quitting employee of the organization must be seen as a potential candidate of the future for the organization and also the brand ambassador of its HR policies and practices. However, many organizations are still treating their employees as "expendable resources" and discharging them in an unplanned manner whenever they choose to do so.

Each organization must have comprehensive separation policies and procedures to treat the departing employees equitably and ensure smooth transition for them. Further, each employee can provide a wealth of information to the organization at the time of separation. Exit interviews can be conducted by the HR department to ascertain the views of the leaving employees about different aspects of the organization, including the efficacy of its HR policies.

Unit III Training and Development

"Training & Development is any attempt to improve current or future employee performance by increasing an employee's ability to perform through learning, usually by changing the employee's attitude or increasing his or her skills and knowledge."

Definition of Training - Organized activity aimed at imparting information and/or instructions to improve the recipient's performance or to help him or her attain a required level of knowledge or skill.

Concept and Importance of Training

- **Productivity** – Training and Development helps in increasing the productivity of the employees that helps the organization further to achieve its long-term goal.
- **Team spirit –** Training and Development helps in inculcating the sense of team work, team spirit, and inter-team collaborations. It helps in inculcating the zeal to learn within the employees.
- **Organization Culture** – Training and Development helps to develop and improve the organizational health culture and effectiveness. It helps in creating the learning culture within the organization.
- **Organization Climate –** Training and Development helps building the positive perception and feeling about the organization. The employees get these feelings from leaders, subordinates, and peers.
- **Quality –** Training and Development helps in improving upon the quality of work and work-life.
- **Healthy work environment** – Training and Development helps in creating the healthy working environment. It helps to build good employee, relationship so that individual goals aligns with organizational goal.
- **Health and Safety –** Training and Development helps in improving the health and safety of the organization thus preventing obsolescence.
- **Morale –** Training and Development helps in improving the morale of the work force.
- **Image –** Training and Development helps in creating a better corporate image.
- **Profitability –** Training and Development leads to improved profitability and more positive attitudes towards profit orientation.
- Training and Development aids in organizational development i.e. Organization gets more effective decision making and problem solving. It helps in understanding and carrying out organizational policies.

- Training and Development helps in developing leadership skills, motivation, loyalty, better attitudes, and other aspects that successful workers and managers usually display.

Types of Training

1. **Orientation Training**-Given to new & inexperienced employees.

2. **Job Training**- Given to Existing employees.

3. **Safety Training**- Given to new & existing employees.

4. **Promotional Training**- Given to existing employees.

5. **Refresher Training**- Given to existing employees.

6. **Remedial Training-** Given to Existing employees.

METHODS OF TRAINING

1. **On the Job Trainings:** These methods are generally applied on the workplace while employees are actually working.
Following are the on-the-job methods.

Advantages of On-the-Job Training:

- It is directly in the context of job
- It is often informal
- It is most effective because it is learning by experience
- It is least expensive
- Trainees are highly motivated
- It is free from artificial classroom situations

Disadvantages of On-the-Job Training:

- Trainer may not be experienced enough to train
- It is not systematically organized
- Poorly conducted programs may create safety hazards

On the Job Training Methods

1.Job Rotation: In this method, usually employees are put on different jobs turn by turn where they learn all sorts of jobs of various departments.

2 **Job Coaching:** An experienced employee can give a verbal presentation to explain the nitty-gritty's of the job.

3. **Job Instruction:** It may consist instructions or directions to perform a particular task or a function. It may be in the form of orders or steps to perform a task.

4. **Apprenticeships:** Generally fresh graduates are put under the experienced employee to learn the functions of job.

5. **Internships and Assistantships:** An intern or assistants are recruited to perform a specific time-bound jobs or projects during their education. It may consist a part of their educational courses.

2. OFF THE JOB TRAINING

These are used away from work places while employees are not working like classroom trainings, seminars etc. Following are the off-the-job methods;

Advantages of Off-the-Job Training:

- Trainers are usually experienced enough to train
- It is systematically organized
- Efficiently created programs may add lot of value

Disadvantages of Off-the-Job Training:

- It is not directly in the context of job
- It is often formal
- It is not based on experience
- It is least expensive
- Trainees may not be highly motivated
- It is more artificial in nature

OFF THE JOB TRAINING METHODS

1. **Classroom Lectures:** It is a verbal lecture presentation by an instructor to a large audience.

2. **Audio-Visual:** It can be done using Films, Televisions, Video, and Presentations etc.

3. **Simulation:** creating a real life situation for decision-making and understanding the actual job

conditions give it.

Following are some of the simulation methods of trainings

- **Case Studies**
- **Role Plays**
- **Sensitivity Trainings**
- **Programmed Instructions:** Provided in the form of blocks either in book or a teaching machine using questions and Feedbacks without the intervention of trainer.
- **Computer Aided Instructions:** It is extension of PI method, by using computers.
- **Laboratory Training**

Barriers to Effective Training:

1. Lack of Management commitment
2. Inadequate Training budget
3. Education degrees lack skills
4. Large scale poaching of trained staff
5. Non-coordination from workers due to downsizing trends
6. Employers and B Schools operating distantly
7. Unions influence

How To Make Training Effective?

1. Management Commitment
2. Training & Business Strategies Integration
3. Comprehensive and Systematic Approach
4. Continuous and Ongoing approach
5. Promoting Learning as Fundamental Value
6. Creations of effective training evaluation system

DESIGN OF TRAINING PROGRAMME

Without a coach, designing your own training plan for the entire season can be a little overwhelming. To simplify the process I've broken it down into 10 easy steps. Follow these steps to design a plan for yourself with the accuracy of a seasoned coach.

Step 1- Set goals.
Step 2- Evaluate event demands
Step 3- Establish schedule framework
Step 4- Periodize your training plan
Step 5- Schedule recovery weeks
Step 6- Schedule performance testing
Step 7- Assign general and race-specific preparation periods
Step 8- Schedule daily workouts
Step 9- Follow the plan
Step 10- Keep track of yourself

EVALUATION OF TRAINING EFFECTIVENESS

The most widely used and popular model for the evaluation of training programs is known as "The Four Levels of Learning Evaluation. The idea behind the model is for an organization to have meaningful evaluation of learning in the organization. The degree of difficulty increases as you move through the levels. However, the knowledge learned regarding the effectiveness of the training program more than compensates for this.

The four levels of the model are:
Level 1: Reaction
Level 2: Learning
Level 3: Behavior
Level 4: Results

Executive Development is the whole of activities aimed at developing the skills and competencies of those that (will) have executive positions in organizations. While "executive" and "manager" and "leader" are often used interchangeably, "executive" is commonly used to signify the top 5% to 10% of the organization. Similarly, "development" and "training" and **"education"** are often used as synonyms, however "development" is generally seen as the most encompassing of the three in terms of activities that build skills and competencies.

While it is typical to find organizations that have dedicated corporate training & development people and processes, it is not always the case that an organization will have a dedicated executive development set of activities. In some organizations (typically large multi-nationals), there is a separate executive development team, in other organizations executive development is handled as one of many activities by the larger corporate training group, and in yet other scenarios there is no executive development activity to speak of.

In contrast to other corporate training & development activities, which have as their core purpose to build tactical skills for employees, executive development plays a different role for the organization. Indeed some executive development is conducted for the purpose of building tactical skills (sometimes referred to as "hard skills" such as business fundamentals- finance, marketing, operations and also "soft skills" such as communication and team building), yet executive development is also used to evaluate future potential future executives as well as a mechanism for the CEO and the executive team to cascade their strategies, goals, and even elements of the culture to the rest of the management team and ultimately the organization. In the best of cases, executive development not only helps an organization execute its key strategies, it can also help provide input to the strategy creation process. In this way, executive development is much more strategic than typical corporate training & development which is used for most employees of an organization.

Executive Development – Process and Techniques

(A) On the Job Training Methods

On the job training methods are by far the most commonly used in training for all levels of personnel. The object of on the job training is to bring the employees to at least a minimum acceptable standard of performance in the shortest possible lime. The worker by these methods learns to master the operations involved on the actual job situation under the supervision of his immediate loss who has to carry the primary burden of conducting this training. Various methods of on the job training are as follows:-

(1) On specific Job—The most common or formal on the job training programme is training for specific job. Current practice in job training has been strongly influenced by the war time training within industry which was first designed to improve the job performance through job instruction training. There are following methods of training:

(A) Experience—This is the oldest method of on-the- job training. But as a sole approach, it is wasteful, time consuming and inefficient. It has been observed that it should be followed by other training methods to make it more effective. In a survey, it was found that they kept up to date through a variety of activities which were largely unrelated to formal continuing education courses. On the job, problem-solving and colleague interactions were prompted as being most important for professional growth by 62 per cent respondents.

(B) Coaching-On-the-job coaching by a superior is an important and potentially effective approach if superior is properly trained and oriented. The technique involves direct personnel instruction and guidance, usually, with extensive demonstration and continuous critical evaluation and correction. The advantage is increased motivation for the trainee and the minimisation of the problem of learning transfer from theory to practice. The danger in this method lies in the possible neglect of coaching by superior.

- Understudy—The understudy method is considered a somewhat different approach from those described above, that a certain person is specifically designated as the heir-apparent. The understudy method makes the trainee an assistant to the current job holder. The trainee learns by experience, observation and imitation. If decisions are discussed with the under study, he can become informed the policies and theories involved. The advantage of this method is that training is conducted in a practical and realistic situation. However disadvantages are many. The method tends to perpetuate mistakes and deficiencies of existing managerial practices. Moreover, the understudies are frequently neglected by those they assist.

(2) Position Rotation—The major objective of job rotation training is the broadening of the background of trainee in the organization. If trainee is rotated periodically from one job to another job, he acquires a general background. The main advantages are: it provides a general background to the trainee, training takes place in actual situation, competition can be stimulated among the rotating trainees, and it stimulates a more co-operative attitude by exposing a man to other fellow's problems and viewpoints. There are certain disadvantages of this method. The productive work can suffer because of the obvious disruption caused by such changes. Rotations become less useful as specialization proceeds, for few people have the breadth of technical knowledge and skills to move from one functional area to another.

(3) Special Projects—This is a very flexible training device. Such special project assignments grow ordinarily out of an individual analysis of weaknesses. The trainee may be asked to perform special assignment; thereby he learns the work procedure. Sometime a task force is created consisting of a number of trainees representing different functions in the organization. Trainees not only acquire knowledge about the assigned activities, but also learn how to work with others.

(4) Selective Reading—Individuals in the organization can gather and advance their knowledge and background through selective reading. The reading may include professional journals and books. Various business organizations maintain libraries for their own executives. Many executives become members of professional associations and they exchange their ideas with others. This is a good method for assimilating knowledge; however, some executives claim that it is very difficult to find time to do much reading other than absolutely required in the performance of their jobs.
(5) Apprenticeship—Apprentice training can be traced back to medieval times when those intended on learning trade skill bound themselves to a master craftsman to learn by doing the work under his guidance. In earlier periods, apprenticeship was not restricted to artisans, but was used in training for the professions, including medicine, law, dentistry, and teaching. Today's industrial organizations require large number of skilled craftsmen who can be trained by this system. Such training is either provided by the organizations or it is also imparted by governmental agencies. Most States now have apprenticeship laws with supervised plans for such training. Arrangements usually provide a mixed programme of classroom and job experience.

(6) Vestibule Schools— large organizations frequently provided what are described as vestibule schools, a preliminary to actual shop experience. As far as possible, shop conditions are duplicated,

but instructive, not output, and are major objective, with special instructors provided. Vestibule schools are widely used in training for clerical and office jobs as well as for factory production jobs. Such training is usually shorter and less complex than that adaptable to the apprenticeship system. Vestibule training is relatively expensive, but these costs are justified if the volume of training is large, or if uniform, high-standard results are important.

OFF-THE-JOB TRAINING METHODS

In these methods, trainees have to leave their workplace and devote their entire time to the development objective. In these methods development of trainees is primary and any usable work produced during training is secondary. Following training techniques are used off-the-job:

1. Special course and lectures: - Lecturing is the most traditional form of formal training method. Special courses and lectures can be established by business organizations in numerous ways as a part of their development programmes. First, there are courses which the organizations themselves establish to be taught by members of the organization. Some organizations have regular instructors assigned to their training and development departments such as Tata and Hindustan Lever in private sector, Life Insurance Corporation, State Bank of India and other nationalized commercial banks, Reserve Bank, Hindustan Steel, Fertilizer Corporation and many others in public sector. A second approach to special courses and lectures is for organizations to work with universities or institutes in establishing a course or series of % courses to be taught by instructors of these institutes. A third approach is for the organizations to send personnel to programmes established by the universities, institutes and other bodies, Such courses are organized for a short period ranging from 2-3 days to a few weeks. The first such programme was the Sloan Fellowship Programme, established in 1931 at Massachusetts Institute of Technology, U.S.A. In India, such courses are organized frequently by the Institute of Management, Administrative Staff College of India, National Productivity Council, NITIE, All India Management Association and some other organizations and universities. ,

2. Conferences -This is also an old method, but still a favorite training method. In order to escape the limitations of straight lecturing many organizations have adopted guided-discussion type of conferences in their training programmes In this method, the participants pool their ideas and experience in attempting to arrive at improved methods of dealing with the problems which are common subject of discussion) Conferences may include buzz sessions that divide conferences into small groups of four or five for intensive discussion. These small groups then report back to the whole conference with their conclusions or questions. Conference method allows the trainees to look at the problem from a broader angle. These conferences, however, have certain limitations. Unless the discussion is directed to the fell needs of the participants that may well feel that the whole session is useless.

3. Case studies: -This technique, which has been developed and popularized by the Harvard Business School, U.S.A. is one of the most common form of training. A case is a written account of a trained reporter or analyst seeking to describe an actual situation. Some cases are merely illustrative, others are detailed and comprehensive demanding extensive and intensive analytical ability. Cases are widely used in a variety of programmes).This method increases the trainee's power of observation, helping him to ask better questions and to look for a broader range of problems. A well chosen case may promote objective discussion, but the lack of emotional involvement may make it difficult to effect any basic change in the behaviour and attitude of trainees.

4. Brainstorming: -This is the method of stimulating trainees to creative thinking. This approach developed by Alex Osborn seeks to reduce inhibiting forces by providing for a maximum of group participation and a minimum of criticism, A problem is posed and ideas are invited. Quantity rather than quality is the primary objective; Ideas are encouraged and criticism of any idea is discouraged. Chain reactions from idea to idea often develop. Later, these ideas are critically examined. There is no trainer in brainstorming and it has been found that the introduction of known experts into it will reduce the originality and practicability of the group contributions. Brainstorming frankly favours divergence, and this fact may be sufficient to explain why brainstorming is so little used as yet in developing countries where new solutions ought to carry the highest premium. It is virtually untried even though its immediate use is limited to new ideas only, not change in behaviour.

5. Laboratory Training-Laboratory training adds to conventional training by providing situations in which the trainees themselves experience through their own interaction some of the conditions they are talking about. In this way, they more or less experiment on themselves. Laboratory training is more concerned about changing individual behaviour and attitude. It is generally more successful in changing job performance than conventional training methods. There are two methods of laboratory training—simulation and sensitivity training.

A. Simulation—An increasingly popular technique of management development is simulation of performance. In this method, instead of taking participants into the field can be simulated in the training session itself. Simulation is the presentation of real situation of organizations in the training session. It covers situations of varying complexities and roles for the participants. It creates a whole field organization, relates participants through key roles in it, and has them deal with specific situations of a kind they encounter in real life. There are two common simulation methods of training: role-playing is one and business game is the other.

(i) Role-Playing—Role-Playing is laboratory method which can be used rather easily as a supplement to conventional training methods. Its purpose is to increase the trainee's skill in dealing with other people. One of its greatest uses is in connection with human relations training but it is also used in sales training as well. It is spontaneous acting of a realistic situation involving two or more persons under class room situations. Dialogue spontaneously grows out of the situation, as it is developed by the trainees assigned to it. Other trainees in the group serve as observers or critics. Since people lake roles every day, they are somewhat experienced in the art, and with a certain amount of imagination they can project themselves into roles other than their own.

(ii) Gaming—Gaming has been devised to simulate the problems of running a company or even a particular department. It has been used for a variety of training objectives, from investment strategy, collective bargaining techniques, to the morale of clerical personnel. It has been used at all levels, from the lop executives to the production supervisors. Gaming is a laboratory method in which role-playing exists but its difference is that it focuses attention on administrative problems, while role-playing tends to emphasize mostly feeling and tone between people in interaction. Gaming involves several teams, each of which is given a firm to operate for a number of periods. Usually the period is a short one, one year or so. In each period, each team makes decisions on various matters such as fixation of price, level of production, inventory level, and so forth'. Since each team is competing with others, each firm's decisions will affect the results of all others.

CAREER PLANNING AND DEVELOPMENT

The word ***career*** refers to all types of employment ranging from semi-skilled through skilled, and semi professional to professional. The term *careers* has often been restricted to suggest an employment commitment to a single trade skill, profession or business firm for the entire working life of a person. In recent years, however, *career* now refers to changes or modifications in employment during the foreseeable future.

There are many definitions by management scholars of the stages in the managerial process. The following classification system with minor variations is widely used:

1. Development of overall goals and objectives,
2. Development of a strategy (a general means to accomplish the selected goals/objectives),
3. Development of the specific means (policies, rules, procedures and activities) to implement the strategy, and
4. Systematic evaluation of the progress toward the achievement of the selected goals/objectives to modify the strategy, if necessary.

The career management process begins with setting goals/objectives. A relatively specific goal/objective must be formulated. This task may be quite difficult when the individual lacks knowledge of career opportunities and/or is not fully aware of their talents and abilities. However, the entire career management process is based on the establishment of defined goals/objectives whether specific or general in nature. Utilizing career assessments may be a critical step in identifying opportunities and career paths that most resonate with someone. Career assessments can range from quick and informal to more in-depth. Regardless of the ones you use, you will need to evaluate them. Most assessments found today for free (although good) do not offer an in-depth evaluation.

OBJECTIVES OF CAREER PLANNING

1. Build commitment in the individual
2. Develop long range perspective
3. Reduce personal turnover expenses
4. Lessen employee obsolescence
5. Ensure organizational effectiveness
6. Allow individual to achieve personal and work related goals.

CAREER DEVELOPMENT

Career development is the series of activities or the on-going/lifelong process of developing one's career. It usually refers to managing one's career in an intra-organizational or inter-organizational scenario. It involves training on new skills, moving to higher job responsibilities, making a career change within the same organization, moving to a different organization or starting one's own business.

Career development is directly linked to the goals and objectives set by an individual. It starts with self-actualization and self-assessment of one's interests and capabilities. The interests are then matched with the available options. The individual needs to train himself to acquire the skills needed for the option or career path chosen by him. Finally, after acquiring the desired competency, he has to perform to achieve the goals and targets set by him.

UNIT-IV
COMPENSATION & MAINTENANCE:

Compensation is a systematic approach to providing monetary value to employees in exchange for work performed. Compensation may achieve several purposes assisting in recruitment, job performance, and job satisfaction.

Compensation is a tool used by management for a variety of purposes to further the existence of the company. Compensation may be adjusted according the business needs, goals, and available resources.

Compensation and Maintenance may be used to:

- Recruit and retain qualified employees.
- Increase or maintain morale/satisfaction.
- Reward and encourage peak performance.
- Achieve internal and external equity.
- Reduce turnover and encourage company loyalty.
- Modify (through negotiations) practices of unions.

JOB EVALUATION- Concept and Significance of Job Evaluation

- Job evaluation is a process of analyzing and assessing the various jobs systematically to ascertain their relative worth in an organization.
- Jobs are evaluated on the basis of content, placed in order of importance. This establishes Job Hierarchies, which is a purpose of fixation of satisfactory wage differentials among various jobs.
- Jobs are ranked (not jobholders)
- Job Evaluation involves determination of relative worth of each job for the purpose of establishing wage and salary differentials.
- Relative worth is determined mainly on the basis of job description and job specification only. Job Evaluation helps to determine wages and salary grades for all jobs. Employees need to be compensated depending on the grades of jobs which they occupy.
- Clearly remuneration must be based on the relative worth of each job.
- The job evaluation is done for the purpose of wage and salary differentials, demand for and supply of labour, ability to pay, industrial parity, collective bargaining etc

PROCESS OF JOB EVALUATION:

1. Defining objectives of job evaluation

i. Identify jobs to be evaluated (Benchmark jobs or all jobs)

ii. Who should evaluate job?

iii. What training do the evaluators need?

iv. How much time involved?

v. What are the criteria for evaluation?

vi. Methods of evaluation to be used

2. Wage Survey

3. Employee Classification

4. Establishing wage and salary differentials.

METHODS OF JOB EVALUATION

A. Analytical Methods

- Point Ranking Methods: Different factors are selected for different jobs with accompanying differences in degrees and points.

- Factor Comparison Method: The important factors are selected which can be assumed to be common to all jobs. Each of these factors are then ranked with other jobs. The worth of the job is then taken by adding together all the point values.

B. Non-Analytical Methods

- **Ranking Method:** Jobs are ranked on the basis of its title or contents. Job is not broken down into factors etc.

- Job Grading Method: It is based on the job as a whole and the differentiation is made on the basis of job classes and grades. In this method it is important to form a grade description to cover discernible differences in skills, responsibilities and other characteristics.

DRAWBACKS IN JOB EVALUATION:

• Encourages employees on how to advance in position when there may be limited opportunities for enhancement as a result of downsizing.

• It promotes internal focus instead of customer orientation

• Not suitable for forward looking organizations, which has trimmed multiple job titles into two or three broad jobs.

COMPONENTS OF EMPLOYEE REMUNERATION- BASE AND SUPPLEMENTARY

What is Salary?

"Salary" is the remuneration received by or accruing to an individual, periodically, for service rendered as a result of an express or implied contract.

An employee is getting paid in lieu of the work done by him/her for the organization, he is employed in.

Employee’s total compensation consists of four-components.

Although the relative proportion of each component in the total compensation varies from firm-to-firm. But the structure of Compensation is almost the same, which is as follows:-

1. Basic pay
2. Dearness allowance
3. House rental allowance
4. Medical allowance
5. City compensatory allowance
6. Conveyance allowances
7. Incentives
8. Fringe benefits

I. Basic Pay

It is the fixed & primary part of the pay-package.

For Blue-Collared employees, basic wage may be based upon the work done (i.e. piece wage system)

For White-Collared employees, basic wage is generally time bound (i.e. time wage system)

Factors which determine the basic wage/salary:-

1. Job-Evaluation
2. Demand for & supply of Labor
3. Prevailing wage-rate
4. Statutory requirements (minimum wage-rate)
5. Employer’s ability to pay

II. Allowances

These allowances ensure the retention and prolonged years of service of am employee in the same organization, as it provides job & salary satisfaction.

1. Dearness allowance- This allowance is given to deal with the pressure of inflation in the economy. It protects the real income (what we get in-hand) against inflation.

2. House rental allowance- Those employers who do not provide living accommodation to its employees, they provide HRA to its employees. It is calculated as a percentage of basic pay.

3. City compensatory allowance- This kind of allowance is generally paid to employees in Metropolitan Cities or other big cities where Cost of Living is comparatively higher than other cities.

4. Conveyance allowances- Some employers pay Travelling Allowance to their employees. It is usually fixed sum, which is paid to cover some part of travelling charges.

5. Incentives- Incentive Compensation is the Performance-Linked remuneration. It is paid with a view to inspire, encourage & motivate employees to work hard & do better. Incentives can be both Individual & Group- Based.

6. Fringe Benefits - These are the additional benefits that an employee gets in addition to the Basic Pay. This is usually paid to Executive-Class Employees.

POTENTIAL APPRAISAL – Concept and Objectives

Potential Appraisal is the identification of the hidden talents and skills of a person. The person might or might not be aware of them.

Potential appraisal is a future – oriented appraisal whose main objective is to identify and evaluate the potential of the employees to assume higher positions and responsibilities in the organizational hierarchy. Many organizations consider and use potential appraisal as a part of the performance appraisal processes.

The objective of potential appraisal is to identify the potential of a given employee to occupy higher positions in the organizational hierarchy and undertake higher responsibilities.

Potential appraisals are required to:

- inform employees about their future prospects;
- help the organization chalk out of a suitable succession plan;
- update training efforts from time to time;
- Advise employees about what they must do to improve their career prospects.

PERFORMANCE APPRAISALS

"It is formal, structured system of measuring, evaluating job related behaviors and outcomes to discover reasons of performance and how to perform effectively in future so that employee, organization and society all benefits."

Performance Appraisals is the assessment of individual's performance in a systematic way. The performance is measured against such factors as job knowledge, quality and quantity of output, initiative, leadership abilities, supervision, dependability, cooperation, judgment, versatility and health. Assessment should be confined to past as well as potential performance also.

OBJECTIVES OF PERFORMANCE APPRAISALS

- General Goals Specific Goals
- Developmental Use
- Individual needs
- Performance feedback
- Transfers and Placements
- Strengths and Development needs
- Administrative Decisions / Uses
- Salary
- Promotion
- Retention / Termination
- Recognition
- Lay offs
- Poor Performers identification
- Organizational Maintenance HR Planning
- Training Needs
- Organizational Goal achievements
- Goal Identification
- HR Systems Evaluation
- Reinforcement of organizational needs
- Documentation
- Validation Research
- For HR Decisions
- Legal Requirements

Performance Appraisal Process

1. Objectives definition of appraisal
2. Job expectations establishment
3. Design an appraisal program
4. Appraise the performance
5. Performance Interviews
6. Use data for appropriate purposes
7. Identify opportunities variables
8. Using social processes, physical processes, human and computer assistance

TECHNIQUES / METHODS OF PERFORMANCE APPRAISALS

TRADITIONAL METHODS OF PERFORMANCE APPRAISAL:-

1. **Rating Scales:** Rating scales consists of several numerical scales representing job related performance criterions such as dependability, initiative, output, attendance, attitude etc. Each scales ranges from excellent to poor. The total numerical scores are computed and final conclusions are derived.
2. **Checklist:** Under this method, checklist of statements of traits of employee in the form of Yes or No based questions is prepared. Here the rater only does the reporting or checking and HR department does the actual evaluation.

3. **Forced Choice Method:** The series of statements arranged in the blocks of two or more are given and the rater indicates which statement is true or false. The rater is forced to make a choice. HR department does actual assessment.

4. **Forced Distribution Method:** Here employees are clustered around a high point on a rating scale. Rater is compelled to distribute the employees on all points on the scale. It is assumed that the performance is conformed to normal distribution.

5. **Critical Incidents Method:** The approach is focused on certain critical behaviors of employee that makes all the difference in the performance. Supervisors as and when they occur record such incidents.

6. **Behaviorally Anchored Rating Scales:** statements of effective and ineffective behaviors determine the points. They are said to be behaviorally anchored. The rater is supposed to say, which behavior describes the employee performance.

7. **Field Review Method:** This is an appraisal done by someone outside employees' own department usually from corporate or HR department.

8. **Performance Tests & Observations:** This is based on the test of knowledge or skills. The tests may be written or an actual presentation of skills. Tests must be reliable and validated to be useful.

9. **Confidential Records:** Mostly used by government departments, however its application in industry is not ruled out. Here the report is given in the form of Annual Confidentiality Report (ACR) and may record ratings with respect to following items; attendance, self expression, team work, leadership, initiative, technical ability, reasoning ability, originality and resourcefulness etc.
The system is highly secretive and confidential.

10. **Essay Method:** In this method the rater writes down the employee description in detail within a number of broad categories like, overall impression of performance, promote ability of employee, existing capabilities and qualifications of performing jobs, strengths and weaknesses and training needs of the employee.

11. **Cost Accounting Method:** Here performance is evaluated from the monetary returns yields to his or her organization. Cost to keep employee, and benefit the organization derives is ascertained. Hence it is more dependent upon cost and benefit analysis.

12. **Comparative Evaluation Method (Ranking & Paired Comparisons):** These are collection of different methods that compare performance with that of other co-workers. The usual techniques used may be ranking methods and paired comparison method.

• ***Ranking Methods:*** Superior ranks his worker based on merit, from best to worst. However how best and why best are not elaborated in this method. It is easy to administer and explanation.

• ***Paired Comparison Methods:*** In this method each employee is rated with another employee in the form of pairs. The number of comparisons may be calculated with the help of a formula as under. N x (N-1) / 2

MODERN METHODS OF PERFORMANCE APPRAISAL:-

1. **Management by Objectives (MBO):** It means management by objectives and the performance is rated against the achievement of objectives stated by the management. MBO process goes as under.

• Establish goals and desired outcomes for each subordinate
• Setting performance standards
• Comparison of actual goals with goals attained by the employee
• Establish new goals and new strategies for goals not achieved in previous year.

2. **Psychological Appraisals:** These appraisals are more directed to assess employee's potential for future performance rather than the past one. It is done in the form of in-depth interviews, psychological tests, and discussion with supervisors and review of other evaluations. It is more focused on employees emotional, intellectual, and motivational and other personal characteristics affecting his performance. This approach is slow and costly and may be useful for bright young members who may have considerable potential. However quality of these appraisals largely depends upon the skills of psychologists who perform the evaluation.

3. **Assessment Centers:** An assessment center is a central location where managers may come together to have their participation in job related exercises evaluated by trained observers. It is more focused on observation of behaviors across a series of select exercises or work samples. Assesses are requested to participate in other similar activities which require same attributes for successful performance in actual job. The characteristics assessed assessment center can be assertiveness, persuasive ability, communicating ability, planning and organizational ability, self confidence, resistance to stress, energy level, decision making, sensitivity to feelings, administrative ability, creativity alertness etc.

4. **360 degree feedback**, also known as 'multi-rater feedback', is the most comprehensive appraisal where the feedback about the employees' performance comes from all the sources that come in contact with the employee on his job.

360 degree appraisal has four integral components:

Limitations of performance appraisal methods

1. Halo Effect

The rater may base the full appraisal on the basis or one positive quality which was found out earlier. For e.g. If a person is evaluated on one quality i.e. emotional stability and if he scores very high in the case of emotional stability, then the rater may also give him high scores (marks or grades) for other qualities such as intelligence, creativity etc., even without judging these characteristics.

2. Problem of Leniency or Strictness

Many raters are too lenient (not strict) in their ratings. High scores may be given to all employees, even if they have no merit. Also a reverse situation may take place, where all employees are rated very strictly and very low scores are given.

3. Central Tendency

Sometimes a rater gives only middle range scores to all individuals. Extremely high or low scores are avoided. This is called Central Tendency.

4. Personal Bias

Performance appraisal is affected by personal bias of the rater. If the rater has good relations with the rate (an employee who is getting rated), he may give higher scores to the rate, even though the rate does not deserve such high scores. So personal bias may lead to favoured treatment for some employees, and bad treatment to others.

5. Paper Work

Some supervisors complain that performance appraisal is pointless paper work. They complain because many times, performance appraisal reports are found only in the files. It does not serve any practical purpose. In other words, the performance appraisal reports are not used by some organizations. They are conducted just as a formality or for the name sake.

6. Fear of Spoiling Relations

Performance appraisal may also affect superior-subordinate relations. An appraisal makes the superior more of a judge than a coach. So, the subordinate may have a feeling of suspicion and mistrust, about the superior.

7. Evaluate performance not person

The rater should evaluate the performance, i.e. output, new ideas, extraordinary efforts, etc. and not the person. In reality, the person is evaluated and not his performance. It should be noted that failure is an event and a not a person.

8. Horn Effect

Sometimes the raters may evaluate on the basis of one negative quality. This results in overall lower rating of the particular employee. For e.g. "He does not shave regularly. Therefore, he must be lazy at work."

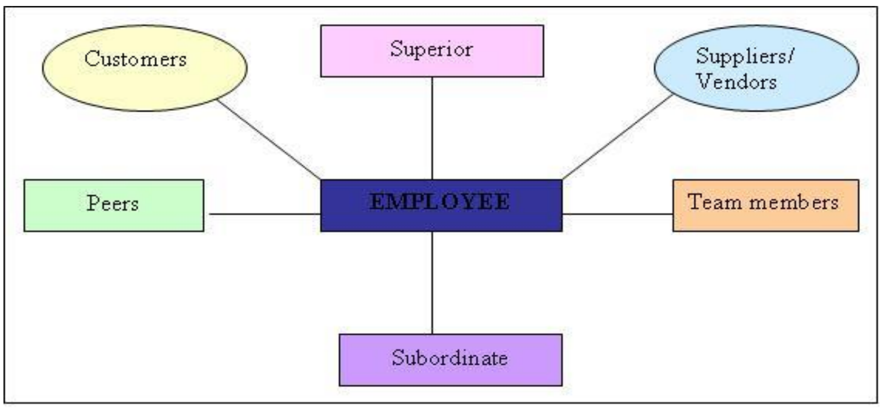
9. Spillover Effect

In this case, the present performance appraisal is greatly influenced by past performance. A person who has not done a good job in the past is considered (assumed) to be bad for doing present work.

360 degree feedback, also known as 'multi-rater feedback', is the most comprehensive appraisal where the feedback about the employees' performance comes from all the sources that come in contact with the employee on his job.

360 degree appraisal has four integral components:

1. Self appraisal
2. Superior's appraisal
3. Subordinate's appraisal
4. Peer appraisal.



360 degree performance appraisal is also a powerful developmental tool because when conducted at regular intervals (say yearly) it helps to keep a track of the changes others' perceptions about the employees. A 360 degree appraisal is generally found more suitable for the managers as it helps to assess their leadership and managing styles. This technique is being effectively used across the globe for performance appraisals. Some of the organizations following it are Wipro, Infosys, and Reliance Industries etc.

Maintenance: Overview of employee Welfare, Health and Safety, Social Security

Employee Welfare: Organizations provide welfare facilities to their employees to keep their motivation levels high. The employee welfare schemes can be classified into two categories viz. statutory and non-statutory welfare schemes. The statutory schemes are those schemes that are compulsory to provide by an organization as compliance to the laws governing employee health and safety. These include provisions provided in industrial acts like Factories Act 1948, Dock Workers Act (safety, health and welfare) 1986, Mines Act 1962. The non statutory schemes differ from organization to organization and from industry to industry.

STATUTORY WELFARE SCHEMES

The statutory welfare schemes include the following provisions:
Drinking Water: At all the working places safe hygienic drinking water should be provided.
Facilities for sitting: In every organization, especially factories, suitable seating arrangements are to be provided.
First aid appliances: First aid appliances are to be provided and should be readily assessable so that in case of any minor accident initial medication can be provided to the needed employee.
Latrines and Urinals: A sufficient number of latrines and urinals are to be provided in the office and factory premises and are also to be maintained in a neat and clean condition.
Canteen facilities: Cafeteria or canteens are to be provided by the employer so as to provide hygienic and nutritious food to the employees.
Spittoons: In every work place, such as ware houses, store places, in the dock area and office premises spittoons are to be provided in convenient places and same are to be maintained in a hygienic condition.
Lighting: Proper and sufficient lights are to be provided for employees so that they can work safely during the night shifts.
Washing places: Adequate washing places such as bathrooms, wash basins with tap and tap on the stand pipe are provided in the port area in the vicinity of the work places.
Changing rooms: Adequate changing rooms are to be provided for workers to change their cloth in the factory area and office premises. Adequate lockers are also provided to the workers to keep their clothes and belongings.
Rest rooms: Adequate numbers of restrooms are provided to the workers with provisions of water supply, wash basins, toilets, bathrooms, etc.

NON STATUTORY SCHEMES

Many non statutory welfare schemes may include the following schemes:
Personal Health Care (Regular medical check-ups): Some of the companies provide the facility for extensive health check-up
Flexi-time: The main objective of the flextime policy is to provide opportunity to employees to work with flexible working schedules. Flexible work schedules are initiated by employees and approved by management to meet business commitments while supporting employee personal life needs
Employee Assistance Programs: Various assistant programs are arranged like external counseling service so that employees or members of their immediate family can get counseling on various

matters.

Harassment Policy: To protect an employee from harassments of any kind, guidelines are provided for proper action and also for protecting the aggrieved employee.

Maternity & Adoption Leave – Employees can avail maternity or adoption leaves. Paternity leave policies have also been introduced by various companies.

Medi - claim Insurance Scheme: This insurance scheme provides adequate insurance coverage of employees for expenses related to hospitalization due to illness, disease or injury or pregnancy.

Employee Referral Scheme: In several companies employee referral scheme is implemented to encourage employees to refer friends and relatives for employment in the organization.

For smooth functioning of an organization, the employer has to ensure safety and security of his employees. Health and safety form an integral part of work environment. A work environment should enhance the well being of employees and thus should be accident free.

In organizations the responsibility of employee health and safety falls on the supervisors or HR manager. An HR manager can help in coordinating safety programs, making employees aware about the health and safety policy of the company, conduct formal safety training, etc. The supervisors and departmental heads are responsible for maintaining safe working conditions. Responsibilities of managers:

- Monitor health and safety of employees
- Coach employees to be safety conscious
- Investigate accidents
- Communicate about safety policy to employees
- Responsibilities of supervisors/departmental heads:
- Provide technical training regarding prevention of accidents
- Coordinate health and safety programs
- Train employees on handling facilities an equipments
- Develop safety reporting systems
- Maintaining safe working conditions

WELFARE PROVISIONS ARE PROVIDED BY THESE AGENCIES:-

1. Central Government
2. State Government
3. Employees
4. Trade Unions
5. Charitable/Social Service Organizations

EMPLOYEE HEALTH & SAFETY

According to joint ILO/WHO Committee, an organizational health, industrial health is:-

1. Promotion & maintenance of physical, mental & social well-being of workers in all occupations.
2. Preventions among workers of ill-health caused by working conditions. (Respiratory diseases due

to smoke at work-place)

3. Protection of workers in their employment from risk-resulting from factors adverse to health.

4. Planning & maintenance of the worker in an occupational environment adapted to his physical & psychological equipment.

MEASURES FOR ENSURING INDUSTRIAL HEALTH

1. Safety Committee
2. Safety training
3. Material handling equipments
4. Guarding of machines
5. Maintenance of plant
6. Regular inspection
7. Equipment re-design
8. Proper clothing
9. Clean floors
10. Safety campaign

EMPLOYEE SOCIAL SECURITY

According to ILO, Social Security is the protection which society provides for members through a series of public measures, against the economic & social distress that otherwise would be caused by the stoppage or substantial reduction of earning resulting from sickness, maternity, employment, injury, unemployment, invalidity, old age & death, the provision of subsidies for families with children.

The following are the ACTS made to ensure SOCIAL SECURITY:-

1. Worker's Compensation Act, 1923

2. The Employee's State Insurance Act, 1948

3. The Employee's Provident Funds & Miscellaneous Provisions Act, 1952

i) Provident Fund Scheme

ii) Employee's Pension Scheme, 1995

iii) Employee's Deposit Linked Insurance Scheme, 1976

4. The Maternity Benefit Act, 1961

5. The Payment of Gratuity Act, 1972

Social security is primarily a social insurance program providing social protection or protection against socially recognized conditions, including poverty, old age, disability, unemployment and others. Social security may refer to:

Social insurance, where people receive benefits or services in recognition of contributions to an insurance program. These services typically include provision for retirement pensions, disability insurance, survivor benefits and unemployment insurance.

Income maintenance, mainly the distribution of cash in the event of interruption of employment, including retirement, disability and unemployment Services provided by administrations responsible for social security. In different countries this may include medical care, aspects of social work and even industrial relations. More rarely, the term is also used to refer to basic security, a term roughly equivalent to access to basic necessities—things such as food, clothing, housing, education, money, and medical care.

Social Security protects not just the subscriber but also his/her entire family by giving benefit packages in financial security and health care. Social Security schemes are designed to guarantee at least long-term sustenance to families when the earning member retires, dies or suffers a disability. Thus the main strength of the Social Security system is that it acts as a facilitator - it helps people to plan their own future through insurance and assistance. The success of Social Security schemes however requires the active support and involvement of employees and employers.

As a worker/employee, you are a source of Social Security protection for yourself and your family. As an employer you are responsible for providing adequate social security coverage to all your workers.

- Background information on Social Security

India has always had a Joint Family system that took care of the social security needs of all the members provided it had access/ownership of material assets like land. In keeping with its cultural traditions, family members and relatives have always discharged a sense of shared responsibility towards one another. To the extent that the family has resources to draw upon, this is often the best relief for the special needs and care required by the aged and those in poor health.

However with increasing migration, urbanization and demographic changes there has been a decrease in large family units. This is where the formal system of social security gains importance. However, information and awareness are the vital factors in widening the coverage of Social Security schemes.

Social Security Benefits in India are Need-based i.e. the component of social assistance is more important in the publicly-managed schemes-

In the Indian context, Social Security is a comprehensive approach designed to prevent deprivation, assure the individual of a basic minimum income for himself and his dependents and to protect the individual from any uncertainties. The State bears the primary responsibility for developing appropriate system for providing protection and assistance to its workforce. Social Security is increasingly viewed as an integral part of the development process. It helps to create a more positive attitude to the challenge of globalization and the consequent structural and technological changes.

- WORKFORCE IN INDIA

The dimensions and complexities of the problem in India can be better appreciated by taking into consideration the extent of the labour force in the organized and unorganized sectors. The latest NSSO survey of 1999-2000 has brought out the vast dichotomy between these two sectors into sharp focus. While as per the 1991 census, the total workforce was about 314 million and the organized sector accounted for only 27 million out of this workforce, the NSSO's survey of 1999-2000 has estimated that the workforce may have increased to about 397 million out of which only 28 million were in the organized sector. Thus, it can be concluded from these findings that there has been a growth of only about one million in the organized sector in comparison the growth of about 55 million in the unorganized sector.

- Organized and Unorganized Sectors

The organized sector includes primarily those establishments which are covered by the Factories Act, 1948, the Shops and Commercial Establishments Acts of State Governments, the Industrial Employment Standing Orders Act, 1946 etc. This sector already has a structure through which social security benefits are extended to workers covered under these legislations.

The unorganized sector on the other hand, is characterized by the lack of labour law coverage, seasonal and temporary nature of occupations, high labour mobility, dispersed functioning of operations, casualization of labour, lack of organizational support, low bargaining power, etc. all of which make it vulnerable to socio-economic hardships. The nature of work in the unorganized sector varies between regions and also between the rural areas and the urban areas, which may include the remote rural areas as well as sometimes the most inhospitable urban concentrations. In the rural areas it comprises of landless agricultural labourers, small and marginal farmers, share croppers, persons engaged in animal husbandry, fishing, horticulture, bee-keeping, toddy tapping, forest workers, rural artisans, etc. where as in the urban areas, it comprises mainly of manual labourers in construction, carpentry, trade, transport, communication etc. and also includes street vendors, hawkers, head load workers, cobblers, tin smiths, garment makers, etc.

- SYNOPSIS OF SOCIAL SECURITY LAWS

The principal social security laws enacted in India are the following:

(i) The Employees' State Insurance Act, 1948 (ESI Act) which covers factories and establishments with 10 or more employees and provides for comprehensive medical care to the employees and their families as well as cash benefits during sickness and maternity, and monthly payments in case of death or disablement.

(ii) The Employees' Provident Funds & Miscellaneous Provisions Act, 1952 (EPF & MP Act) which applies to specific scheduled factories and establishments employing 20 or more employees and ensures terminal benefits to provident fund, superannuation pension, and family pension in case of death during service. Separate laws exist for similar benefits for the workers in the coal mines and tea plantations.

(iii) The Workmen's Compensation Act, 1923 (WC Act), which requires payment of compensation to the workman or his family in cases of employment related injuries resulting in death or disability.

(iv) The Maternity Benefit Act, 1961 (M.B. Act), which provides for 12 weeks wages during maternity as well as paid leave in certain other related contingencies.

(v) The Payment of Gratuity Act, 1972 (P.G. Act), which provides 15 days wages for each year of service to employees who have worked for five years or more in establishments having a minimum of 10 workers.

Separate Provident fund legislation exists for workers employed in Coal Mines and Tea Plantations in the State of Assam and for seamen.

Measures being undertaken at present –

• The various Central Acts on Social Security are being examined in the light of the recommendations of the 2nd National Commission on Labour. Relevant amendments are proposed in the EPF and MP Act as also the ESI Act. The consultation process is on with reference to the amendment suggestions received in case of the Maternity Benefit Act and the Workmen's Compensation Act.

• Innovative measures are proposed in the running of the Social Security Schemes of EPFO and ESIC. This includes flexible benefit schemes tailored to the specific requirements of different segments of the population.

- SUMMARY OF PRESENT INITIATIVES IN WORKING OF EPFO & ESIC

The profiles of the Employees' Provident Fund Organization and the Employees' State Insurance Corporation are being changed towards greater accessibility and client satisfaction.

The EPFO extends to the entire country covering over 393824 establishments. At present, over 3.9 crore EPF Members and their families get benefits under the social security schemes administeredby the EPFO. The total corpus of the EPF Scheme 1952, EDLI Scheme, 1976 and Employees Pension Scheme 1995 together amounts to about Rs.1,39,000 crores. Over the years, the volume of service rendered to subscribers as well as investments made, etc. by EPFO have grown manifold. With a view to provide better services to subscribers and employers, the organization has launched the Project RE-INVENTING EPF, INDIA since June, 2001. The prime objectives of this Project are to provide the subscribers better and efficient services, to help the employers by reducing the cost of compliance and to benefit the organization to register geometric growth in all fields. An important part of this Project is the allotment of the UNIQUE IDENTIFICATION NUMBER-the SOCIAL SECURITY NUMBER to the EPF subscribers, issuing of BUSINESS NUMBERS to the employers and Business Process Re-engineering.

The strategy for implementation has been evolved and the allotment of the Social Security Number has begun with the entire activity being carried out in smaller phases for effective data collection. The criteria considered for the allotment of SSN include the centralized control of Uniqueness, ensuring the least manual intervention during allotment and near 100% Uniqueness accuracy levels. The Social Security Number in a nutshell is a big effort towards solving the problem of providing social protection to migrant labour and to make the data base of EPFO adaptable to the present trend of high job mobility among workers.

The Employees State Insurance Scheme provides need based social security benefits to insured workers in the organized sector. As in the case of the EPFO, the ESIC has also taken up the daunting task of tailoring different benefit schemes for the needs of different worker groups. The scheme, which was first introduced at two centers in 1952 with an initial coverage of 1.20 lakh workers, today covers 71.59 lakh workers in about 678 centers in the country. It benefits about 310. 54 lakh beneficiaries including the family workers of the insured persons, across the country. The scheme is being gradually to cover new centers and steps are being taken for creation of requisite infrastructure for providing medical care to a larger number of insured persons and their families. While the cash benefits under the scheme are administered through a network ofabout 850 local offices and pay offices, medical care is provided through 141 ESI Hospitals, 43 ESI Annexes, 1451 ESI Dispensaries and 2789 Clinics of Insurance Medical Practitioners. The total number of medical officers under the Scheme is about 10,480.

There have been a number of new developments in the ESIS during the past five years. Each year, it is extended to new areas to cover additional employees. The new employees covered varied from 30,500 in 1998, 89030 in 2000 to 46430 till Jan., 2003. Low paid workers in receipt of daily wages up to Rs. 40/- have been exempted from payment of their share of contribution. Earlier this limit was Rs. 25/-. This measure has benefited about six lakh insured workers across the country. In order to provide relief to insured persons suffering from chronic and long term diseases, the list of diseases for which Sickness Benefit is available for an extended period up to two years at an enhanced rate of 70% of daily wages, was enlarged by adding four new diseases, keeping in view the international classification of disease profiles and the quantum of malignancies of some diseases which had come to light over the last few years. The contributory conditions for this benefit were also reduced from 183 days to 156 days in the two-year period preceding the diagnosis.

The ESIC has made plans to commission Model hospitals in each State. Thirteen States/ UTs have so far agreed, in principle, to hand over one hospital each to the ESIC for setting up of Model hospital. Two Hospitals have been earmarked for being developed for superspeciality medical care in cardiology, i.e., Rohini at Delhi and Chinchwad in Maharashtra.

In order to improve the standard of medical care in the States, the amount reimbursable to the State Governments for running the medical care scheme has been increased to 87.5 % of Rs. 700 per capita with effect from 1.4.2003. The ESIC has formulated action plans for improving medical services under the ESI scheme with focus on modernization of hospitals by upgrading their emergency and diagnostic facilities, development of departments as per disease profiles, waste management, provision of intensive care services, revamping of grievance handling services, continuing education programme, computerization and upgradation of laboratories etc. The action plans have been in operation since 1998. The ESIC has also taken certain new initiatives to promote and popularize Indian Systems of Medicines (ISM) along with Yoga and have drawn up programmes for establishing these facilities in ESI hospitals and dispensaries in a phased manner.

SOCIAL SECURITY TO THE WORKERS IN THE ORGANIZED SECTOR

Social Security to the workers in the Organized Sector is provided through five Central Acts, namely, the ESI Act, the EPF & MP Act, the Workmens' Compensation Act, the Maternity Benefit Act, and the Payment of Gratuity Act. In addition, there are a large number of welfare funds for certain specified segments of workers such as beedi workers, cine workers, construction workers etc.

SOCIAL SECURITY AND ILO/ISSA

Government of India has accepted the international commitment that arises from the ratification of the Covenant of Social, Economic and Cultural Rights of the united nations. This Covenant, inter alia recognises the right of everyone to social security including social insurance. India has also ratified some Conventions of the ILO including Workmen's Compensation, (Occupational Diseases) – (No. 18 and revised Convention No. 42 of 1934); Equality of Treatment (Accident Compensation) – No. 19 of 1925; and Equality of Treatment (Social Security) – No. 1 & 8 of 1962.

ILO CONVENTION 102 has however not been ratified by India.

The following nine benefits are laid down in the ILO Convention No.102 of 1952 namely, sickness benefit, medical benefit, maternity benefit, employment injury benefit, old-age benefit, invalidity benefit, survivors benefit, unemployment benefit and family benefit.

SOCIAL SECURITY COVERAGE IN INDIA

Most social security systems in developed countries are linked to wage employment. In India our situation is entirely different from that obtaining in developed countries. The key differences are:

i) We do not have an existing universal social security system

ii) We do not face the problem of exit rate from the workplace being higher than the replacement rate. Rather on the contrary lack of employment opportunities is the key concern,

iii) 92% of the workforce is in the informal sector which is largely unrecorded and the system of pay roll deduction is difficult to apply.

Even today 1/8th of the world's older people live in India. The overwhelming majority of these depend on transfers from their children. Addressing social security concerns with particular reference to retirement income for workers within the coverage gap has been exercising policy makers across the world. In India the coverage gap i.e. workers who do not have access to any formal scheme for old-age income provisioning constitute about 92% of the estimated workforce of 400 million people. Hence the global debate and evaluation of options for closing the coverage gap is of special significance to India. The gradual breakdown of the family system has only underscored the urgency to evolve an appropriate policy that would help current participants in the labour force to build up a minimum retirement income for themselves.

4. The coverage gap in India is broadly categorized under the following groups:

a) Agricultural sector = 180 million.

b) Contract, services, construction = 60 million.

c) Trade, Commerce, transport, storage

& Communications = 100 million.

d) Others = 30 million.

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Total = 370 million

however one important factor to be kept in mind on the coverage issue is that this classification does not include the various social security schemes run by other ministries for different target groups. We have also not included indirect funding through subsidies, pds, social assistance programmes, food-for-work programmes, tax concessions etc.

EXTENSION OF COVERAGE

Currently, social security policy makers and administrators are engaged in a wide-ranging debate to redress the problems in providing social security in the country. This debate has thrown up various arguments on the efficacy of publicly managed social security schemes as opposed to privately managed schemes. There is no standard model that can be adopted on this issue. In the Indian context the privately managed schemes can at best be considered as supplementary schemes after the mandatory schemes managed publicly. It is only the publicly managed scheme, which will extend to all the sectors of the workforce. The challenge of closing the coverage gap in social security provisions has to be developed at two levels. The first level involves the re-engineering of the institutional arrangements to increase efficiency. The second level is to create an appropriate legislative and administrative framework for significant increase in the social security coverage especially in the unorganized sector.

In India currently only about 35 million out of a workforce of 400 million have access to formal social security in the form of old-age income protection. This includes private sector workers, civil servants, military personnel and employees of State Public Sector Undertakings. Out of these 35 million, 26 million workers are members of the Employees' Provident Fund Organization. As such the current publicly managed system in India is more or less entirely anchored by the Employees' Provident Fund Organisation. It may be noted that in the last 50 years, the Employees' Provident Fund Organisation has been in existence, there has been no instance of any scam or a situation where the Fund has been exposed to speculation and risk. Another important contribution of EPF is now proposed to extend to the critical life benefit of providing shelter. The Shramik Awas Yojana aims at providing a cost effective Housing Scheme specific for EPF numbers. This involves cooperation between organizations such as HUDCO, Housing Agencies, State Governments, Employers and EPF Members with the EPFO playing the role of facilitator. The investments are directed into the prescribed securities and portfolios as per the pattern laid down by the Finance Ministry.

BUSINESS ETHICS & CSR (209)

UNIT I

chapter 1
LIBERTY

1.1 Introduction

Liberty the word more used but less understand .When we think about liberty we have a great feeling but when we practice it we find lot of restrain and confusion. Therefore it becomes necessary to know the real meaning. The word has been drown from a Latin word ‘Liber’ which means absence of restrains, but if we enjoy absolute freedom without limitation it will be harmful to others. if people enjoy absolute freedom and liberty it will destroy the social harmony and will lead to anarchy.

1.2 Meaning and Definition of liberty

Herbert Spencer “Every man is free to do that which he will, provide him infringer equal freedom on any other man”.

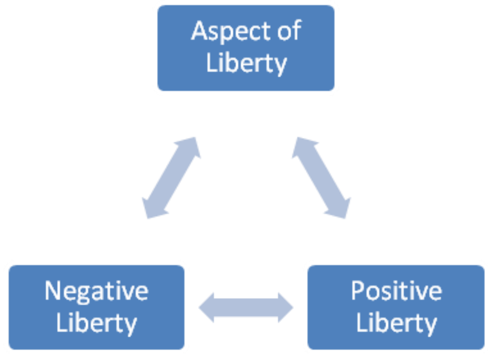
Ramsay Muir “Liberty means to secure enjoyments by the individuals and by association of the power to think their own way under the shelter of the law provided they do not impair the corresponding rights of others”.

C.D.Burns “liberty is to grow to one’s natural height and to develop one’s ability.

As above Discussion we can say freedom is such a state of life in which less restrain and maximum opportunities’ available for development and self actualization of the life of man.

1.3 Nature of liberty

1. Liberty is not the promise of absence of all restrains.
2. Liberty imposes the rational restrains.
3. Liberty is not a license to do anything and everything anywhere.
4. Liberty is concern to welfare of civil society.
5. Liberty provide to people opportunities of self actualization and self development.
6. Liberty is a states in which any person enjoy their right without impairing the corresponding right of others.
7. Legal environment is necessary for enjoyment of right of liberty.
8. Liberty is basic requisites for enjoy the rights of human being.



1.4 Negative liberty

Negative view of liberty stand for absolute liberty that means absence of all restrains. As per this theory a person is free to think and to do all things that he thinks useful to them. Jone locke, Hebbes, Rousseau, Adam smith, Ricardo, Herbert Spencer, Macaulay are the main supporters of this theory.

1.5 Feature of Negative liberty

There are following Feature of this theory-

1. Liberty mean absences of all restrain.
2. Every individual is the guardian of his own interest and need not to worry about surroundings.
3. A person can work in social interest but his personal interest will be integrated with social interest and his personal liberty is precondition of social liberty.
4. Negative liberty favour to open competition.
5. The function of state is limited in this context.
6. Social progress depends upon the development of individual harmony.
7. The government is best which govern the least.
8. The interference of the state should be minimal.

1.6 Criticism of Negative liberty

1. Clash between individual and social interest

As per this theory the individual interest is much more focused than the social interest, but what about practical? Is it possible to ignore social interest for a single person? Moreover it and it is not always a rule that personal interest is integrated with social interest.

2. The role of law can 'not be underestimated

Whenever an individual's liberty distract the liberty of others the role of low activate automatically. Some time absolute liberty not only harm the society, it also harm the person himself.

3. Bad results of the theory of Laissez faire (non-interference of state)

The supporters of the negative theory of liberty are in favour of the non interference of state and promote the competition by empowering to every individual. This theory does not care of those who are weaker and unable to come in competition in the word of survival of the fittest.

4. A person himself cannot be sole judge of his internal

A man is puppet of mistake .we can 'not expect that he always takes best decision without influencing the human greed. So the fate of whole of the society can't be left on his decision..

5. **A person has no existence without society**

A person is not an autonomous body his existence is not possible without society. A person has many social, professional and personal relations and he can't ignore their interest.

1.7 Positive liberty

Positive theory does not support absence of all restrain but it supports absence of restrain in rational manner. The status of law would be as a guardian and role of state is more important to establish such an environment in which everyone can enjoy has liberty.

Kant, Fichte, T.H. Green, Maclver, Bentham, Laski, Barker, Hobbouse are the main supporters of the 'theory of positive liberty'.

1.8 Features of Positive liberty

Following are the main features of liberal view of liberty (positive)-

1. Liberty is absence of restraint with rationality.
2. Positive liberty theory emphasize the society more than an Individual.
3. In the absence of regulatory environment equal opportunity of development is not possible.
4. Liberty should be always defined in the context of society.
5. The state is safeguard of society.
6. The duty of state is to create positive environment for realization of real mean of liberty.

1.9 Criticism of Positive liberty

Though the positive theory of liberty is quite popular, yet there are the following drawbacks in it-

1. **State becomes absolute**

As per positive theory of liberty the state should ensure the rational level of liberty for everyone but it's often found that the state in the name of social and national interest restricts individual liberty.

2. **Positive theory of liberty is not possible in class divided society**

The main phenomena of positive this theory to provide equal opportunity to enjoy their liberty but it is not possible in class divided society where society is divided in so many classes on the basis of wealth, cast, creed and religion.

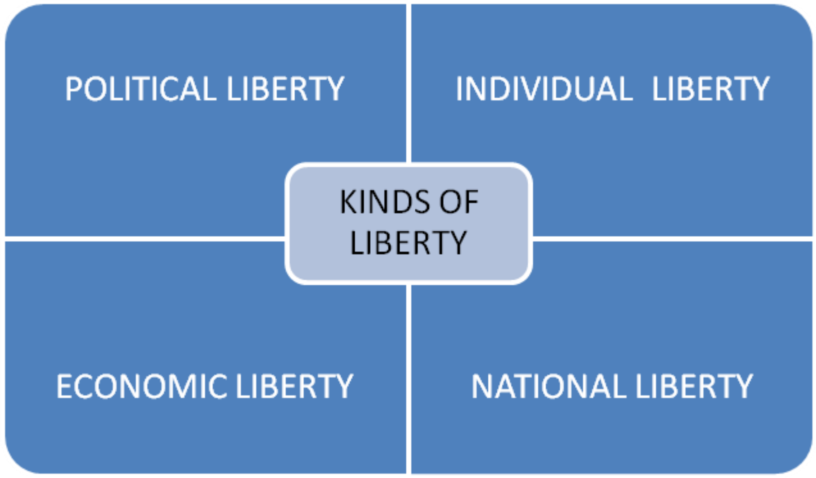
3. **Every law does not favour the concept of positive liberty**

In positive theory of liberty the role of law is like a guardian but in some cases when dispute arises between individual liberty and social liberty get preference.

4. **Democratic Govt. is not guarantee of liberty**

The role of Govt. is important in the establishment of such a society in which every individual can enjoy there freedom but ensure the liberty of every individual is not possible and for the lack of betterment of society ,individual liberty is ignored.

1.10 Kinds of liberty



1. Political Liberty

Laski observes political liberty, which means the power to be achieved in the affair of the state. Political liberty means enjoyment of political rights. Political rights include following rights-

1. Rights to vote
2. Right to Contest Election
3. Right to hold Public office
4. Right to criticize and oppose the policies of the government
5. Right to form political parties
6. Right to Interest Group and pressure groups
7. Right to change the government through constitutional means

2. Individual Liberty

The primary condition to enjoy liberty is not to hinder the equal freedom of others, the social order and health and morality. Individual freedom include following points-

1. Freedom of Speech and expression
2. Freedom of tastes and pursuits
3. Freedom of residence
4. Freedom of movement
5. Freedom of conscience
6. Freedom to choose any profession or trade or occupation
7. Freedom to enjoy the fruits of one's labour
8. Freedom to profess or not to profess any religion
9. Freedom to accept or not to accept any ideology.
10. Right to personal property

3. Economic Liberty

In Simple language we can define Economic liberty as freedom of livlihood. Laski writes "By economic liberty we mean security and opportunity to find reasonable significance in the earning of one's daily bread. Economic freedom include following points. Economic liberty is a surety to available equal opportunities to employment for everyone. Economic liberty favour a society free from hunger, starvation and destitution.

4National Liberty

Being a citizen of a particular country, an individual enjoy national liberty-

1. Provide their own Constitution

2. Free to organize a governing body
3. Free to taking decision in International affair by formulating foreign policy.
4. Develop a control system over political system.

1. Eternal Vigilance

Eternal vigilance is a primary condition of liberty for every individual. The people should be always ready to bear any consequences to get their status of liberty .Jefferson also once observed that "No country can really defend her freedom unless the people through the expression of protest do not keep their government vigilant."

2. Grant of Equal Rights to all

Liberty is a natural right of every individual but any discrimination on the ground of sex, caste and religion one side esure the liberty of a particular group of people but another side rest of people deprived to enjoy that particular opportunity.

3. Democratic Polity

Liberty and democracy are a coincide term. We cannot imagine a democratic polity without the presence of civil, economic, political and individual liberty.

4. Unbiased Government Control

In positive theory of liberty govt act as a guardian and it's his duty to ensure equal opportunity to every individual to enjoy their liberty. The responsibility of govt. is to provide equal benefits of administrative policies and laws to every section of society .The Govt. should also be responsible and accountable before the public.

5. Protection of fundamental rights

The first and foremost known safeguard is constitution that obligate to every people of India to protect their fundamental rights

In our country the judiciary is a independent body and have supremacy over political and democratic system. The main purpose of this kind of supremacy to

7.Separation of powers

The power of Executive and legislature are separately describe to avoid any concentration. Absence of such separations may be causes of Dispute and Harmful for liberty of people but power of checking to each other should be also mentioned.

8. Economic Equality

In absence of economic equality real enjoyment of liberty is not possible. Equitable and fairer distribution of income , wealth and resources and adequate opportunities of employment as well as for development are essential safeguards of liberty.

9. Freedom of Press

Freedom of press take for granted as a fourth pillar of democracy. It provides a great support to uphold the right of liberty of Individuals. Press and other Form of media help in create a awareness about their rights.

Summary

The Liberty has been drown from a Latin word 'Liber' which but if we enjoy absolute freedom without limitation it will be harmful to others. if people enjoy absolute freedom and liberty it will destroy the social harmony and will lead to anarchy. "Liberty means to secure enjoyments by the individuals and by association of the power to think their own way under the shelter of the law

provided they do not impair the corresponding rights of others". Features of liberty are not the promise of absence of all restrains, Liberty imposes the rational restrains., Liberty is not a license to do anything and everything anywhere., Liberty is concern to welfare of civil society, Liberty provide to people opportunities of self actualization and self development. Two aspects of liberty comprises of positive and negative liberty. Kinds of liberty are: political, Individual, economical and national liberty. There are few safeguards of liberty as: Eternal Vigilance, Grant of Equal Rights to al,l Democratic Polity, Unbiased Government Control etc.

Chapter-2 Equality

1.1 Introduction

Equality is first and foremost principal of democracy. Equality is one of the fundamental right Provided and protected by Indian Constitution. Commonly we can define equality as "all are equal in all respect either treatment or reward but it is an ideal and imaginative phenomena .it is not possible either naturally or artificially.

Generally we find out two types of inequalities .Natural inequalities and manmade. Natural inequalities such as impact of environment, by birth physical and mental efficiencies or differences etc while. Manmade inequalities like cast, colour creed, religion, sex and place of birth etc.

We can define the equalities in negative and positive sense .Negative equalities implies abolition of all special privileges and facilities which generates some special classes and positive equality express that equal right should be made available to all the people without any exception or discrimination.

1.2 Nature of Equality

1. Absolute Equality is not possible. Equality seeks to abolish all un-natural and men made inequalities.

2. Equality focuses to abolish all men made inequalities on the basis of birth, creed colour ,sex , property and wealth.

3.Equality assure to provide equal opportunities of treatment and reward to every person.

4.Equity mean equal distribution of reward and resources.

1.3 Classification of Equality

Social Equality

To develop a sound society for all social equality is must necessary. Though there are many natural and manmade inequalities are exist in society in yet try to establish social equality as much as possible. There should not be any distinction made on the basis of caste, colour, Sex, race, language, education or social status. Any one should not forbidden by avail the facility of education ,worship, job or social fest and cultures and if only that should be on justified basis Social equality Ensure following conditions –

1. Any kind of special privileges on the basis of caste, creed, sex and religion.
2. Prohibition of discrimination on the basis of caste, creed, sex and religion.
3. Any person can assess public places like bus stand, Railway station, Hotels, Roads, without any discrimination.
4. No discrimination is made on the basis of sex.
5. Everyone gets equal opportunities in public employment.

Political Equality

The political equality presumes that human beings always act wisely and take decision with discretion. Everyone is able to understand Indian polity whether they are wealthy or not, more or less educated or more or less powerful in India .It is also assumed that when a person has equal political right then they can convey best expression to public and either inspire or force to policy maker to make policies in the interest of common mass.

Political equality ensure that every citizen enjoy it political rights without any hindrances and their active participation in State affairs. Following are the main characteristics of political equality

1. Any person who completes their age of 18 can exercise the right of vote without any discrimination.
2. Any citizen after attaining the age of 25 years can Contest election to become the member of state legislature and the Loke Sabha and he is not disqualified by any court.
3. Every citizen can make an appeal before the judiciary and high govt. officials in case of abolition of his rights or any harassment.
4. A citizen can make responsible to the Government for its failures.
5. In democracy, everyone has right to form political parties and right to become the member of political parties in interest of public affairs.

Legal Equality

Legal equality implies that all are equal before law and law are equal for all. Equality before law committed to provide equal remedies and provision of law to all whether they are equal or law and for fulfill this purpose they enact equal laws for equal and unequal laws for unequal ,though such discrimination should be on rational ground. Law are equal for all express that no one forbids by process of law on the basis of colour, caste, creed ,sex and education.

Legal equality means equal opportunity for all to secure legal protection of their rights and freedom .following provisions are necessary for the legal aspect of equality-

1. Everyone has equal right to achieve legal protection and no one can deprive them on the basis of cast, colour, creed, sex or religion.
2. The enactment of laws would be equal for every citizen.
3. Every citizen can enjoy their rights without any discrimination the basis of cast, colour, creed, sex or religion.
4. Everyone have equal rights to get appointment in public offices if he is eligible.
5. Laws of the state can provide special privileges and facilities to the weaker sections under certain provisions of the constitution.

Natural Equality

Natural Equality means abolition of manmade inequalities which are generally practices in society. People are different to each other in sense of physical and psychological capacities and capabilities, but everyone deserves respect accordingly. Nobody can Harass or exploit to other.

Civil Equality

Social equality requires equal honors and recognition to all section of the society that are socially and economically weak. Social evils should be abolished and people should be treated equally in all the matters.

Economic Equality

Economic equality stands for equitable and adequate opportunities to all for work and for earning of their livelihoods. The rich should not be as much as rich that he can exploit the poor that means the gap between rich and poor should be minimize.

1.4 Relation between Equality and Liberty

Liberty and equality an complementary to each other .In absence of one, existence of other is not possible. As per opinion of Some scholar Equity and liberty are opposed to each other, both can't exist together .The main supporters of this view are Lord Acton,De toccqueville, Hogg, Hayek, Friedman and few others. Lord Acton observes, "The passion for equality has made vain the hope for liberty."The protagonists of this view advance the following main arguments in support of their view:

1. Liberty means absence of all restrain but we know all are not equal there are many type of natural and man mead inequality so it needs implies necessary restrain for levelling purposes.
2. Man's Economic status is related to his personal ability and pursuit so how can state Interfere to achieve equal status for all.
3. Liberty limited the role of state while for achieving the state of equality interference of state is necessary.
4. Personal property is natural; it cannot be limited for the sake of society.
5. Liberty accept rational restrain for development, while equality accept restrain for prevent over development.
6. Liberty accepts capitalism while equality demand abolition of capitalism.

Some scholars of political thought hold that liberty and equality are compliment to each other .existence of one cannot possible without other. Laski, Arnold, Tawny, Rousseau, Barker and pollard are the main supporters of this view.

This view supported by most of Authors by following reason-

1. Equality opposed extreme level of anything. so it help to other to enjoy there right of freedom.
2. In absence of Equality conflict and revolution will be arises in society so Status of absolute liberty will not be possible.
3. Liberty and equality both required some special privilege.
4. Equality is primary condition for liberty. According to H.J. Gans, "I think there is no inherent conflict between liberty and equality. The society we must create should provide enough equality to permit everyone the liberty to control his or her own life as much as possible, without inflicting undue inequality on others."
5. Equality and Liberty is two main Pillars of Democracy. In absence of any, the existence of democracy is not possible.
6. Equality and Liberty both are required for development of society.

Finally it concluded that liberty and equality are closely related to each other and compliment of other. Our constitution and system committed to secure both in full mean. It accept as per Pollard. "There is only one solution to the problem of liberty, it lies in equality."

CHAPTER 3

JUSTICE

Introduction

Justice means 'just', 'Right', or 'Reasonable', that means set everyone in proper and natural order.

The word ‘Justice is derived from the Latin word ‘Jus’ which means joining or fitting of a bond. In simple language we can say justice is a state in which the act and decision should be in reasonable form.

Meaning and Definition of Justice

According to Barker, “Justice is itself a value which connects the three values of liberty, equality and fraternity. Justice is, therefore, concerned with the adjustment of human relation, through a just combination of values which are necessary to an organized system of human relation”.

In the word of D.D,Rafel, “The Idea of justice is plainly concerned with the general ordering of the society.”

Salmond “Justice means to provide everybody his share”.

Rabert C. “The idea of justice connotes a rightful balance in a situation where two or more parties or principles are in conflict.”

Features of Justice

1. The phenomena is relating with human being.
2. It is a combination of ethics, values, legitimacy and ideals.
3. Justice favour Act impartially and no any discrimination should be made on the basis of religion, cast, creed, sex, place of birth etc.
4. There are some sorts of discrimination on reasonable grounds permitted in legal procedure.
5. Human welfare is primary condition of justice. So whatever system support to social welfare that’s called a system for justice.
6. Justice favour reasonable interest of human being.
7. It does expect with everyone to be honest towards his duty.
8. It is not an absolute concept; it is related to a particular period of time and vary from one society to another.
9. It is dynamic and change as per social needs and social values of society.

Basic Elements of Justice

The basic elements of justice are required to followed by everyone-

Liberty

Justice always implies a sense of liberty and it is should be required for the sound development of people. A balance between authority of state and freedom of individual is a symbol of Justice.

Equity before law

It’s very well known that law is equal for everyone but what about those who are not even capable of seeking a shelter of law. So a continuous effort of equality is required to make every one equal before law.

Impartiality

Impartiality is another form of justice, one should not be partial towards anything then only they can be justified towards decision making.

Truth

Truth is the soul of justice. Discovering real facts with evidences can be termed as truth. Till the search of truth justice could not be possible.

Respect of one's capabilities

Capabilities of one person may differ from that of other. So capabilities of one's should be honoured and task assigned to them must be according to their capability.

Dimensions of Justice

Legal Justice

Legal dimension of justice is very important. Expression of justice without law is not possible. In legal dictionary system of law called system of justice. Legal justice implies, Law should be just and Justice should be according to law.

To maintain the law and order in society state enact so many laws but law should be justified. A justified law should be in public Interest, Enacted by Elected representative of society and according to social acceptance.

A law is justified it's not enough; law should be followed by authorities and judiciary. As per law and order following condition should be followed

1. Everyone should be equal before law
2. Judiciary should be autonomous and independent
3. Unwanted detainment should be prevent
4. A person should not be punished till conviction is not completed.

Political Justice

Political justice assures to provide equal opportunities to all in state affairs. Political justice practices only in a democratic state. Political justice is related with political rights and equality. Political justice is concerned with following-

1. Right to vote
2. Right to election
3. Right to public offices
4. Right to critics
5. Right to hold public offices
6. Right to criticise the government and to protest
7. Right to form political parties
8. Respect of human rights
9. Protection of the interest of minorities

Social Justice

Social justice include social, economical and political, all kind of justice. Social justice demand a dignity to everyone and no discrimination made on the basis of caste, creed, sex or religion. Equal opportunity of education and development should be available, an environment of peace and harmony required for social justice. According to K. Subba Rao "In its large sense it seeks to remove the imbalances in the political, economic and social life of the people. In short social justice helps to bring about a Just society." To establish a justified society following Condition should be fulfilled –

1. Provision should be made for Prohibition of exploitation and discrimination.
2. Social order should be reviewed
3. Interests of minorities should be protected

4. Everyone should provide equality before law
5. Absence of special rights
6. Special facilities should be provided to weaker sections of society
7. Abolition of superstitions and social evils
8. Just conditions should be provided at workplace
9. To stop unequal distribution of wealth and provision should be make for equal distribution of wealth
10. Freedom of thought, expression, faith and worship should be promote.
11. Democratic Government
12. Just balance between freedom and social control should be establish.
13. Social security is the requirement of the society.

Economic Justice

To achieve a status of economic justice the state should provide welfare services to the poor and weaker sections and disparities of income were reduce through taxation ;

M.C. Setavad"Economic Justice is the provision of equal opportunities to the citizens to acquire wealth and use it for their living. It implies to these persons who are disabled or old unemployed and therefore, not in a position to acquire wealth should be helped by society to live". Following provisions are necessary to achieve the status to fulfil the economic condition.

1. Ensure decent living wages
2. Basic needs of everyone of society should be fulfilled
3. Attempt to reduce wide economic Disparities
4. Make provisions regarding to protection of interest of workers
5. Make provisions regarding special protection of the interests of weaker section
6. Attempt to Just distribution of wealth
7. Attempt to end economic exploitation

Relationship between Justice, Liberty and Equality

Relationship between justice and liberty

Liberty is primary condition of justice. In absence of liberty, who will demand the justice? When a person deprive by his liberty he will start to search for justice. Just full society have a distinguish social value.

1. Liberty never qualifiy the condition of justice until and unless it's not spread over equally.
2. Negative Liberty is against to theory of Justice.
3. Justice is provide a rational level of liberty that anybody can enjoy without appose to social interest.

Relationship between Justice and Equality

Justice is necessary to maintain the prestige and dignity of a person but it's not necessary that justice always support to equality, sometime justice support inequalities also. The concept of equality undergoes a change when there is a change in society.

In a feudal society inequality by birth is just. In a capitalist society inequality in private property is just. Although equal protection of law available for everyone but to make every one equal before law inequality is necessary on some rational ground.

Finally It concluded that without liberty we cannot think, talk or demand for justice and equality. Only a person who is achieving his state of liberty he can talk about equality and seek for justice.

Rights and recognition.

The concept of rights based ethics is that there are some rights, both positive and negative, that all humans have based only on the fact that they are human. These rights can be natural or conventional. That is, natural rights are those that are moral while conventional are those created by humans and reflect society's values. Rights Based Ethics System: Examples

- The right to life
- The right to liberty
- The right to pursue happiness
- The right to a jury trial
- The right to a lawyer
- The right to freely practice a religion of choice
- The right to express ideas or opinions with freedom as an individual
- The right of individuals or organizations to express opinions or share information freely in written medium
- The right to come together and meet in order to achieve goals
- The right to be informed of what law has been broken if arrested
- The right to call witnesses to speak on one's behalf if accused of a crime
- The right of a person to be treated with respect and dignity even after beign found guilty of a crime
- The right to freely live and travel within the country
- The right to work
- The right to marry
- The right to bear children
- The right to free education
- The right to join any peaceful parties or groups of choice
- The right to be free from slavery
- The right to not be tortured
- The right to be treated as equal to others
- The right to be considered to be innocent until proven guilty
- The right to personal privacy
- The right to own property

The idea of a good society:

A good society relies heavily on such moral dialogues to determine the values that will constitute the shared cultures of its communities; it does not merely base its values on tradition. Moreover, to ensure broad and genuine adherence to values, a good society relies on the moral voice-the informal controls members of communities exert on one another-rather than law.

The law has often been viewed as the tool of society that ensures that millions of its members will live up to the prescriptions contained in the society's values. Indeed, one obvious sociological function of the law is to prescribe how people are expected to behave (from paying taxes to meeting obligations to caring for children). The law also prescribes what people should refrain from doing (from smoking in defined public spaces to selling, buying, or consuming crack cocaine). Usually, laws also contain penalties to be meted out and sometimes rewards to be accorded for those who ignore, or live up to, these normative prescriptions.

When values are less and less heeded, it is often argued that the society requires more laws, more regulations, stronger sanctions, more law enforcement resources and powers, and more severe punishments for those who violate the laws. Indeed, in most Western societies, one can observe that over the past several decades as social order has deteriorated, there have been increasing demands for more and harsher punishments, more police, and more powers to various public authorities. However, the rising economic and social cost of this approach to value-enforcement-as demonstrated by the failing war against controlled substances and the fact that while crime; has recently declined in the United States, it is still at much higher levels than it was a generation ago-shows that the high reliance'on law enforcement for value fortification does not make for a good society

Understanding Rights Based Ethics

The United States is founded upon a Rights Based Ethics System in which citizens are believed to have certain unalienable rights. John Locke was one of the primary supporters of this type of system as it takes the perspective of what the ideal world looks like and creates a rights system based upon those ideas.

- The United States of America's Bill of Rights is a document that epitomizes the type of rights that are embraced by Rights Based Ethical Systems.

- The Universal Declaration of Human Rights is another document that embraces and exhibits the values of a Rights Based Ethical System.

Beauchamp and Childress, authors and ethical theorists, have defined the term "right" to be a "justified claim that individuals and groups can make upon other individuals or upon society; to have a right is to be in a position to determine by one's choices, what others should do or need not do."

Rights can be legal in nature, or pertain to human rights or moral rights.

The opposite of rights based ethics are utilitarian ethics. Utilitarian ethics are based on the maximization of "good outcomes" and minimizations of "bad outcomes."

Domain of politics and ethics

Democracy and welfare state

Democracy is a form of government in which all eligible citizens are meant to participate equally – either directly or, through elected representatives, indirectly – in the proposal, development and establishment of the laws by which their society is run. While theoretically these definitions are in opposition, in practice the distinction has been blurred historically. The political system of Classical Athens, for example, granted democratic citizenship to an elite class of free men and excluded slaves and women from political participation. In virtually all democratic governments throughout ancient and modern history, democratic citizenship consisted of an elite class until full enfranchisement was won for all adult citizens in most modern democracies through the suffrage movements of the 19th and 20th centuries. The English word dates to the 16th century, from the older Middle French and Middle Latin equivalents.

Democracy contrasts with forms of government where power is either held by an individual, as in an absolute monarchy, or where power is held by a small number of individuals, as in an oligarchy. Nevertheless, these oppositions, inherited from Greek philosophy,[3] are now ambiguous because contemporary governments have mixed democratic, oligarchic, and monarchic elements. Karl Popper defined democracy in contrast to dictatorship or tyranny, thus focusing on opportunities for the people to control their leaders and to oust them without the need for a revolution.

Several variants of democracy exist, but there are two basic forms, both of which concern how the whole body of all eligible citizens executes its will. One form of democracy is direct democracy, in which all eligible citizens have direct and active participation in the political decision making. In most modern democracies, the whole body of eligible citizens remain the sovereign power but political power is exercised indirectly through elected representatives; this is called a representative democracy or democratic republic.

Non democracy

Non democracies are governments that are not democratic. Examples include totalitarian states, autocracies, despots, autarchies, and dictatorships

Welfare state:

A welfare state is a concept of government in which the state plays a key role in the protection and promotion of the economic and social well-being of its citizens. It is based on the principles of equality of opportunity, equitable distribution of wealth, and public responsibility for those unable to avail themselves of the minimal provisions for a good life. The general term may cover a variety of forms of economic and social organization. The sociologist T.H. Marshall identified the welfare state as a distinctive combination of democracy, welfare, and capitalism.

Modern welfare states include the Nordic countries, such asIceland, Sweden, Norway, Denmark, and Finland which employ a system known as the Nordic model. Esping-Andersen classified the most developed welfare state systems into three categories; Social Democratic, Conservative, and Liberal. The welfare state involves a transfer of funds from the state, to the services provided (e.g. healthcare, education) as well as directly to individuals ("benefits"). It is funded through redistributionist taxation and is often referred to as a type of "mixed economy".[Such taxation usually includes a larger income tax for people with higher incomes, called a progressive tax. This helps to reduce the income gap between the rich and poor.

Market and Globalisation.

Globalization (or globalisation) is the process of international integration arising from the interchange of world views, products, ideas and other aspects of culture. Advances in transportation and telecommunications infrastructure, including the rise of the telegraph and its posterity the Internet, are major factors in globalization, generating further interdependence of economic and cultural activities.

Though scholars place the origins of globalization in modern times, others trace its history long before the European age of discovery and voyages to the New World. Some even trace the origins to the third millennium BCE. In the late 19th century and early 20th century, the connectedness of the world's economies and cultures grew very quickly.

The term globalization has been increasingly used since the mid-1980s and especially since the mid-1990s. In 2000, the International Monetary Fund (IMF) identified four basic aspects of globalization: trade and transactions, capital and investmentmovements, migration and movement of people, and the dissemination of knowledge. Further, environmental challenges such as climate change, cross-boundary water andair pollution, and over-fishing of the ocean are linked with globalization.[8] Globalizing processes affect and are affected bybusiness and work organization, economics, socio-cultural resources, and the natural environment

Unit II

Freedom and Determinism

The "freedom vs. determinism" controversy is a long-standing one among both philosophers and psychologists. Here a resolution to the problem is presented that is based on the simple and well-known statistical concept of "degrees of freedom." It is shown that in the larger gestalt of the situation, our consciousness and behavior are both determined in the ways that psychoanalysts and behaviorists have argued, and are free in the ways that existentialists and humanists have argued. Gestalt therapy uses the tools of focused awareness to help people become aware of internal and external determining tendencies and, when they wish, increase their freedom of choice in situations where formerly they experienced little or none.

"Is our behavior free, or is it determined? The question, typically posed in precisely this dualistic fashion, is a well-worn bone on which both philosophers and psychologists have gnawed for years, decades, centuries, even millennia. Here I will offer, I believe, an elegant solution to the controversy.

Psychoanalysts insist that that much of our behavior is determined by experiences of infancy and early childhood. Behaviorists maintain that most of what we do is controlled by the cues and reinforcers in our environment, which include the behavior of others. Existentialist philosophers and psychologists, and humanistic psychologists take precisely the opposite position, as in Jean-Paul Sartre's statement that even a man standing before a firing squad may choose to face death in a brave manner or a cowardly one, and in that sense is free. With such radically different points of view, how are we to tell who is right?

Ironically, a definitive answer to this dilemma can, I believe, be found not in the statements of either philosophers or psychologists but rather in a simple equation known to every beginning statistics student.

The fascinating implication is that the psychoanalysts, behaviorists, existentialists, and humanists are all entirely correct. More than a little of our behavior is indeed determined early in life and reenacted again and again thereafter, often in the forms of complexes or neuroses which may seem compulsive in their character--the "unfinished business" that haunts us until we come to terms with it in therapy, counseling, or some other healing or transformative context--or until we die. A good deal of our behavior is also fairly rigidly determined by environmental cues and reinforcers as simple as a red or green traffic light or a restroom sign that says "Men" or "Women," or as complex as the mixture of personalities in a given situation and the political or religious ideologies and agendas they espouse. Both Freud and Skinner were right.

On the other hand, as Soren Kierkegaard, Jean Paul Sartre, Simone De Beauvoir, Rollo May, James Bugenthal, and Carl Rogers all emphasized, in every moment we have a chance to act differently than we have acted in similar situations in the past. And as yogis, Buddhist teachers, George Gurdjieff, and Fritz Perls and his compatriots pointed out, the more we cultivate our ability to notice what factors in our past or in our environment are influencing us at any given moment, and how we are responding to them either internally or externally, the better able we become to broaden the range of choices available to us. Personal freedom can be learned, developed, and cultivated. In a Gestalt working session, a person may be asked to exaggerate some act in order to enhance her awareness of it, which in turn opens up the possibility of doing something else. She may be asked to stop doing something she has always done, in order to discover alternatives. She may experiment with acting in ways that had been forbidden, and hence were threatening and "off limits." She may let go of a facade and find her authentic self. And so on almost *ad infinitum.*

So the larger Gestalt of the "freedom vs. determinism" issue is that the question cannot be answered abstractly except in such general terms as those offered just above. In real life it must always be answered concretely, in reference to a given person in a given situation. We can ask how many degrees of freedom that person has, what internal or external conditions are limiting him or her, and what he or she might do to open up a broader range of possibilities if that's desirable. So the next time you hear the tired old argument about whether our actions and consciousness are free or determined, just ask, "Whose?" "When?" "In what situation?" Then an answer becomes possible. And that answer can't be found by logic or argument, but only by examination of the particulars.

Libertarianism

Libertarianism (Latin: *liber*, "free") is a political philosophy that upholds liberty as its principal objective. Libertarians seek to maximize autonomy and freedom of choice, emphasizing political freedom, voluntary association and the primacy of individual judgment.

Libertarians generally share a skepticism of authority, however, they diverge on the scope of their opposition to existing political and economic systems. Various schools of libertarian thought offer a range of views regarding the legitimate functions of state and private power, often calling to restrict or even to wholly dissolve pervasive social institutions. Rather than embodying a singular, rigid systematic theory or ideology, libertarianism has been applied as an umbrella term to a wide range of sometimes discordant political ideas through modern history.

Although some present-day libertarians advocate laissez-faire capitalism and strong private property rights, such as in land, infrastructure and natural resources, others, notably libertarian socialists, seek to abolish capitalism and private ownership of the means of production in favor of their common or cooperative ownership and management. While minarchists believe a limited centralized government is necessary to protect individuals and their property from certain transgressions, anarchists propose to completely eliminate the state as an illegitimate political system.

The term *libertarianism* originally referred to a philosophical belief in free will but later became associated with state socialism and Enlightenment-influenced political movements critical of institutional authority believed to serve forms of social domination and injustice. While it has generally retained its earlier political usage as a synonym for either social or individualist anarchism through much of the world, in the United States it has since come to describe pro-capitalist economic liberalism more so than radical, anti-capitalist egalitarianism. In the *Stanford Encyclopaedia of Philosophy*, libertarianism is defined as the moral view that agents initially fully own themselves and have certain moral powers to acquire property rights in external things. As individualist opponents of social liberalism embraced the label and distanced themselves from the word *liberal*, American writers, political parties and think tanks adopted the word *libertarian* to describe advocacy of capitalist free economics and a night-watchman state.

Morality and Society

With increasing frequency, activities in our society raise the question of what sort of moralities guiding our people. Killing without apparent remorse and a tendency to dehumanise each other are only two of the most obvious symptoms.
This is partly due to the fact that our Guyanese society is diverse, a combination of various cultures and traditions: it is heterogeneous in composition. Dynamic and changing, it is pluralistic in many ways. It has always been to some extent, morally pluralistic, and unfortunately this pluralism appears to be widening.
We can distinguish four levels of moral pluralism: radical moral pluralism, the pluralism of moral principles, the pluralism of moral practices, and the pluralism of self-realisation.
Radical moral pluralism describes that state of affairs in which people hold mutually irreconcilable views about morality, such as what the terms right and wrong mean, and which actions are right and wrong.
People who hold such radically divergent views, however, do not form a society and herein lies the danger for Guyana. To be a society, a group must accept certain fundamental practices and principles. At a basic level, for instance, there must be general agreement that life is worth living, that the lives of the members of the society should be respected, or that people will respect existing differences to the extent that they do not interfere with each other. Some people do not care whether they live or die and also believe it is their moral duty

to kill others, it may not be possible to convince them they are mistaken. But people with such a view cannot form a society. To the extent that society and morality go together, the morality of a society must be a shared morality, not a radically pluralistic set of opposing moralities. The morality of the gunmen who raided communities in the not too distant past falls in this category. Yet a society may be morally pluralistic on the other three levels. Secondly, a plurality of moral principles within a society does not necessarily mean irreconcilable diversity. Pluralism on the level of moral principles is compatible with social agreement on the morality of many basic practices. Such agreement does not necessarily involve agreement on the moral principles different people use to evaluate practices. The vast majority of the members of our society, for example, agree that murder is wrong. Some members of our society operate only at the level of conventional morality, and do not ask why murder is wrong. Some may believe it is wrong because the Creator in whom they believe forbids such acts; others because it violates human dignity; others because murder has serious consequences for society as a whole, and so on. Each of these involves a different moral principle. These different principles are compatible with similarity of moral judgments.

Further, we look on the third level, where we see specific actions. On this level, we encounter a variety of moral opinions about some of them. This pluralism regarding moral practices may stem from differences of moral principles, but it may also stem from differences of fact or of perception of facts, differences of circumstances, or differences in the weighing of relevant values. Even when there is basic agreement on principles, not all moral issues are clear.

In a changing, dynamic, developing society there is certainly room for moral disagreement, even if there is unanimous agreement that what helps the society to survive is moral. New practices might be seen by conservatives as threatening the society's survival, and the same practice might be championed by others as the necessary means for survival. Pluralism of practices, however, is compatible with areas of agreement, and this is usually the case. On the fourth level of moral pluralism is that of self-realization. As long as the members of a society abide by the basic moral norms, they are allowed, in such a pluralistic society, to choose freely their other values and their lifestyles. This constitutes a kind of moral pluralism, because self-development and fulfilment, according to some views, are moral matters.

A society that allows divergence of self-development within the basic moral framework tolerates a great many differences that would not be allowed or found in a homogeneous society.

Theories of moral reasoning-teleological and Deontological Theories.

Normative ethical systems can generally be broken down into three categories: deontological, teleological and virtue ethics. The first two are considered deontic or action-based theories of morality because they focus entirely upon the actions which a person performs. When actions are judged morally right based upon their consequences, we have teleological or consequentiality ethical theory. When actions are judged morally right based upon how well they conform to some set of duties, we have a deontological ethical theory.

Whereas these first two systems focus on the question "What should I do?," the third asks an entirely different question: "What sort of person should I be?" With this we have a virtue-based ethical theory - it doesn't judge actions as right or wrong but rather the character of the person doing the actions. The person, in turn, makes moral decisions based upon which actions would make one a good person.

Deontology and Ethics

Deontological moral systems are characterized primarily by a focus upon adherence to independent moral rules or duties. Thus, in order to make the correct moral choices, we simply have to understand what our moral duties are and what correct rules exist which regulate those duties. When we follow our duty, we are behaving morally. When we fail to follow our duty, we are behaving immorally.

Teleology and Ethics

Teleological moral systems are characterized primarily by a focus on the consequences which any action might have (for that reason, they are often referred to as consequent list moral systems, and both terms are used here). Thus, in order to make correct moral choices, we have to have some understanding of what will result from our choices. When we make choices which result in the correct consequences, then we are acting morally; when we make choices which result in the incorrect consequences, then we are acting immorally.

Virtue Ethics

Virtue-based ethical theories place much less emphasis on which rules people should follow and instead focus on helping people develop good character traits, such as kindness and generosity. These character traits will, in turn, allow a person to make the correct decisions later on in life. Virtue theorists also emphasize the need for people to learn how to break bad habits of character, like greed or anger. These are called vices and stand in the way of becoming a good person.

Unit III

Concept of business ethics

Business ethics (also **corporate ethics**) is a form of applied ethics or professional ethics that examines ethical principles and moral or ethical problems that arise in a business environment. It applies to all aspects of business conduct and is relevant to the conduct of individuals and entire organizations. Business ethics has normative and descriptive dimensions. As a corporate practice and a career specialization, the field is primarily normative. Academics attempting to understand business behavior employ descriptive methods. The range and quantity of business ethical issues reflects the interaction of profit-maximizing behavior with non-economic concerns. Interest in business ethics accelerated dramatically during the 1980s and 1990s, both within major corporations and within academia. For example, today most major corporations promote their commitment to non-economic values under headings such as ethics codes and social responsibility charters. Adam Smith said, "People of the same trade seldom meet together, even for merriment and diversion, but the conversation ends in a conspiracy against the public, or in some contrivance to raise prices." Governments use laws and regulations to point business behavior in what they perceive to be beneficial directions. Ethics implicitly regulates areas and details of behavior that lie beyond governmental control. The emergence of large corporations with limited relationships and sensitivity to the communities in which they operate accelerated the development of formal ethics regimes.

Corporate code of ethics: environment, accountability, Responsibility.

Ethical codes are adopted by organizations to assist members in understanding the difference between 'right' and 'wrong' and in applying that understanding to their decisions. An ethical code generally implies documents at three levels: codes of business ethics, codes of conduct for employees, and codes of professional practice. Many companies use the phrases 'ethical code' and 'code of conduct' interchangeably but it may be useful to make a distinction. A code of ethics will start by setting out the values that underpin the code and will describe a company's obligation to its stakeholders. The code is publicly available and addressed to anyone with an interest in the company's activities and the way it does business. It will include details of how the company plans to implement its values and vision, as well as guidance to staff on ethical standards and how to achieve them. However, a code of conduct is generally addressed to and intended for employees alone. It usually sets out restrictions on behavior, and will be far more compliance or rules focused than value or principle focused. Also this code is good for the Non Governmental Organization. Ethical codes are often adopted by management, not to promote a particular moral theory, but rather because they are seen as pragmatic necessities for running an organization in a complex society in which moral concepts play an important part.

They are distinct from moral codes that may apply to the culture, education, and religion of a whole society.

Often, acts that violate ethical codes may also violate a law or regulation and can be punishable at law or by government agency remedies.

Even organizations and communities that may be considered criminal in nature may have ethical codes of conduct, official or unofficial. Examples could include hacker communities, bands of thieves, and street gangs.

The Jewish Written Torah and Oral Torah comprise the earliest and best preserved ethical code. Adapted to every field of actual day-to-day life since thousands of years, Jewish Halakha is the oldest collective body of religious laws, laws and jurisdictions still in use.

CSR: Arguments for and against

Corporate social responsibility (**CSR**, also called **corporate conscience**, **corporate citizenship** or **sustainable responsible business/ Responsible Business**) is a form of corporate self-regulation integrated into a business model. CSR policy functions as a self-regulatory mechanism whereby a business monitors and ensures its active compliance with the spirit of the law, ethical standards and international norms. In some models, a firm's implementation of CSR goes beyond compliance and engages in "actions that appear to further some social good, beyond the interests of the firm and that which is required by law." CSR aims to embrace responsibility for corporate actions and to encourage a positive impact on the environment and stakeholders including consumers, employees, investors, communities, and others.

The term "corporate social responsibility" became popular in the 1960s and has remained a term used indiscriminately by many to cover legal and moral responsibility more narrowly construed.

Proponents argue that corporations increase long term profits by operating with a CSR perspective, while critics argue that CSR distracts from business' economic role. A 2000 study compared existing econometric studies of the relationship between social and financial performance, concluding that the contradictory results of previous studies reporting positive, negative, and neutral financial impact, were due to flawed empirical analysis and claimed when the study is properly specified, CSR has a neutral impact on financial outcomes.

Critics questioned the "lofty" and sometimes "unrealistic expectations" in CSR. or that CSR is merely window-dressing, or an attempt to pre-empt the role of governments as a watchdog over powerful multinational corporations.

Political sociologists became interested in CSR in the context of theories of globalization, neo liberalism and late capitalism. Some sociologists viewed CSR as a form of capitalist legitimacy and in particular point out that what began as a social movement against uninhibited corporate power was transformed by corporations into a 'business model' and a 'risk management' device, often with questionable results.

CSR Models drivers and standards

Major drivers of CSR are:

1. Shareholders

Shareholders invest in the capital of the company. The company thus holds the responsibility of a fair dividend and value of investment for the them

2. Employees

The company needs proper conditions for work, financial benefits, participation in decision making and training and motivation.

3. Customers

The customer has to be provide quality goods, complete information, customer service, need based product and regular supply of goods.

4. Community

The company owes the community a pollution free environment, promote artistic and cultural activities and support local health care programs.

5. Organisations

The organisation should have a healthy competition and share resources.

6. Government

The company owes payment of taxes, obeying the law and contributing to national goals.

Unit IV

Issues in social responsibility: Discrimination and Affirmative Action

Discrimination is action that denies social participation or human rights to categories of people based on prejudice. This includes treatment of an individual or group based on their actual or perceived membership in a certain group or social category, "in a way that is worse than the way people are usually treated". It involves the group's initial reaction or interaction, influencing the individual's actual behavior towards the group or the group leader, restricting members of one group from opportunities or privileges that are available to another group, leading to the exclusion of the individual or entities based on logical or irrational decision making.

Not all discrimination is based on prejudice, however. In the U.S., government policy known as affirmative action was instituted to encourage employers and universities to seek out and accept groups such as African-Americans and women, who have been subject to the opposite kind of discrimination for a long time. Discriminatory traditions, policies, ideas, practices, and laws exist in many countries and institutions in every part of the world, even in ones where discrimination is generally looked down upon. In some places, controversial attempts such as quotas have been used to benefit those believed to be current or past victims of discrimination—but have sometimes been called reverse discrimination themselves.

The best short definition of affirmative action is one that focuses on its aim: "to contribute to the demise of occupational segregation by reducing the racist or sexist impact which bias-free practices . . . have on women and minorities." (Ezorsky, p. 265).

Some authors distinguish two kinds of affirmative action:

Unspecific affirmative action is illustrated by "good faith" outreach efforts to recruit minorities and women (without specific numerical targets) through the advertising of positions . . . *Specific* affirmative action is exemplified in . . . setting numerical hiring goals and . . . validation of qualification requirements. (Ezorsky, *ibid.*)

("Validation of qualification requirements" means that employers must prove that tests used to determine qualifications reliably measure ability to perform the job.)

There are three common myths about affirmative action:

1. Affirmative Action means that incompetent people are given jobs for which they are unqualified.

2. Affirmative Action always involves preferential hiring or admissions for members of certain racial or gender groups.

3. When Affirmative Action involves preferential hiring or admissions, as it sometimes does, this is always discrimination in the bad sense of the term.

Diversity

In sociology and political studies, the term **diversity** (or *diverse*) is used to describe political entities (neighborhoods, student bodies, etc.) with members who have identifiable differences in their cultural backgrounds or lifestyles.

The term describes differences in racial or ethnic classifications, age, gender, religion, philosophy, physical abilities, socioeconomic background, sexual orientation, gender identity, intelligence, mental health, physical health, genetic attributes, behavior, attractiveness, or other identifying features.

In measuring human diversity, a diversity index measures the probability that any two residents, chosen at random, would be of different ethnicities. If all residents are of the same ethnic group it's zero. The diversity index does not take into account the willingness of individuals to cooperate with those of other ethnicities. If half are from one group and half from another it's .50.

Political creeds which support the idea that diversity is valuable and desirable hold that recognizing and promoting these diverse cultures may aid communication between people of different backgrounds and lifestyles, leading to greater knowledge, understanding, and peaceful coexistence. For example, "Respect for Diversity" is one of the six principles of the Global Greens Charter, a manifesto subscribed to by Green parties from all over the world. In contrast to diversity, some political creeds promote cultural assimilation as the process to lead to these ends.

Women in the Workplace: Sexual Harassment and Women's Rights.

Sexual harassment at work can have very serious consequences both for the harassed individual as well as for other working women who experience it second hand.

The consequences to the individual employee can be many and serious. In some situations, a harassed woman risks losing her job or the chance for a promotion if she refuses to give in to the sexual demands of someone in authority. In other situations, the unwelcome sexual conduct of co-workers makes the working conditions hostile and unpleasant- putting indirect pressure on her to leave the job. Sometimes, the employee is so traumatized by the harassment that she suffers serious emotional and physical consequences—and very often, becomes unable to perform her job properly.

According to data complied by Equal Rights Advocates, a women's law center in the U.S., 90 to 95% of sexually harassed women suffer from some debilitating stress reaction, including anxiety, depression, headaches, sleep disorders, weight loss or gain, nausea, lowered self-esteem and sexual dysfunction. In addition, victims of sexual harassment lose $4.4 million dollars in wages and 973,000 hours in unpaid leave each year in the United States.

The consequences to working women as a group are no less serious. Sexual harassment has a cumulative, demoralizing effect that discourages women from asserting themselves within the workplace, while among men it reinforces stereotypes of women employees as sex objects. Severe or pervasive sexual harassment in certain types of businesses creates a hostile or intimidating environment that causes women to leave their jobs and look elsewhere for work or discourages them from seeking those jobs in the first place.

The effect on the morale of all employees can also be serious. Both men and women in a workplace can find their work disrupted by sexual harassment even if they are not directly involved. Sexual harassment can have a demoralizing effect on everyone within range of it, and it often negatively impacts company productivity on the whole.

Advertising and Marketing: False or Deceptive Advertising,

False advertising or **deceptive advertising** is the use of false or misleading statements in advertising, and misrepresentation of the product at hand, which may negatively affect many stakeholders, especially consumers. As advertising has the potential to persuade people into commercial transactions that they might otherwise avoid, many governments around the world use regulations to control false, deceptive or misleading advertising. "Truth" refers to essentially the same concept, that customers have the right to know what they are buying, and that all necessary information should be on the label.

False advertising, in the most blatant of contexts, is illegal in most countries. However, advertisers still find ways to deceive consumers in ways that are legal, or technically illegal but unenforceable.

Hidden fees and surcharges

Service providers often tack on the fees and surcharges that are not disclosed to the customer in the advertised price. One of the most common is for activation of services such as mobile phones and credit cards, but is also common in broadband,telephony, gym memberships, and air travel. In most cases, the fees are hidden in fine print, though in a few cases they are so confused and obfuscated by ambiguous terminology that they are essentially undisclosed. Hidden fees are frequently used in airline and air travel advertising. In the case of motor vehicles, hidden charges may include taxes, registration fees, freight, pre-delivery inspection (PDI), licenses, insurance or other costs associated with getting a vehicle on the road. Airlines and car manufacturers hire firms that disadvantage customers through:

Unfair contract terms, notably with respect to consumer compensation.

- Use customer data for purposes other than they were obtained for.
- Apply unfair fees, charges and penalties on transactions.
- Place artificial restrictions on the time period during which customers can submit claims.

For delivered items in the US, the amount of shipping and handling fees is typically not disclosed (although the fact that there will be such charges is disclosed). Advertisers will often claim an item costs "only" a small amount (or is even "free") when, in fact, the shipping charges enable them to make a profit.

"Going out of business" sales

In many cases, liquidators hired to sell merchandise from a closing store will actually raise the prices on items that were already marked-down on clearance. For items already marked down, this means the liquidator increases the price and then "discounts" it from there. By marking up their prices before discounting, these companies are maintaining their previous profit margin. Also common is for the sale prices at a retail chain's other stores to be lower than the liquidator's prices at the closing stores. Liquidators typically refuse to accept returns, so if a customer notices being overcharged, there is no apparent recourse. This is used by most advertisers trying to prove the acceptability of their products.

Misuse of the word "free"

The usual meaning of "free" is "devoid of cost or obligation". However, retailers often use the word for something which is merely included in the overall price. One common example is a "buy one, get one free" sale. The second item is not "free" under the normal definition, since, to obtain it, the buyer is obliged to pay the full cost of the first item.

Consumer Safety and Product Liability.

Product liability is the area of law in which manufacturers, distributors, suppliers and retailers are held responsible for any injuries products cause. Regardless of any contractual limitations of liability, if a product or any of its component parts are defective its manufacturer may be liable for damage under the Consumer Protection Act (CPA) or the common law of negligence.

An action under the CPA or for negligence can be brought for death,personal injury and damage caused to private property as the result of a product defect. Neither type of action can be used to compensate for pure economic or consequential loss.

This guide considers claims for a defective product under the Consumer Protection Act. See also our Out-Law Guide to Product Liability for negligence.

Liability **under Part I of the CPA**

The CPA introduced statutory liability for defective products. Liability under the CPA exists alongside liability in negligence, and in some cases a common law claim may succeed where a claim would not be available under the CPA.

The CPA applies to both products used by consumers and products used in a place of work. The CPA imposes strict liability on manufacturers of defective products for harm caused by those products. This means thatpeople who are injured by defective products can sue for compensation without having to prove that the manufacturer was negligent. It is merely necessary to prove that the product was defective, and that any injury or damage was most likely caused by the product.

Applicability

The CPA applies to all consumer products and products used at a place of work. The inclusion of 'products used at a place of work' extends the scope of the law to include sales of products between businesses rather than just sales to consumers if such products are used in a place of work.

A claim may be brought under the CPA by any person who is injured by a 'defective product', regardless of whether that person purchased the product. A claim may be brought for death, personal injury or damage toprivate property in excess of £275. However, no claim may be brought for damage to business property or for 'pure' economic losses. In particular, the CPA provides that a claim cannot be made for the loss of or damage to the defective product itself. Other than these restrictions, the CPA imposes no financial limit on the producer's total liability.

Who is liable?

Under the CPA, the 'producer' of a product is liable for any defects. The producer is the manufacturer of the finished product or of a component of the finished product, or any person responsible for an industrial or other process to which any essential characteristic of the product is attributable. Liability may also be imposed on any party who holds itself out to be the producer through the use of a name or trade mark, and any person who imported the product into the European Community.

As such, there may be more than one party liable under the CPA in respect of the same damage. Liability is joint and several, so the injured party may sue any or all of these people. Liability cannot be excluded or limited.

What is a 'defective product'?

A 'product' can include goods, electricity and the component parts of any product. Where a component of or raw material incorporated into a finished product is defective both the manufacturer of the component and the manufacturer of the finished product are potentially liable.

A product is defective for the purposes of the CPA if its safety, including not only the risk of personal injury but also the risk of damage to property, is "not such as persons generally are entitled to expect". A product will not generally be considered defective just because a safer version is later put on the market.

In assessing the safety of the product the court will take into account all of the circumstances, specifically including:

- all aspects of the marketing of the product;
- the use of any mark in relation to the product;
- instructions and warnings;
- What might reasonably be expected to be done with the product at the time the product was supplied.

The Moral Dimensions of Information Technology

Information ethics has been defined as "the branch of ethics that focuses on the relationship between the creation, organization, dissemination, and use of information, and the ethical standards and moral codes governing human conduct in society". It provides a critical framework for considering moral issues concerning informational privacy, moral agency (e.g. whether artificial agents may be moral), new environmental issues (especially how agents should behave in the infosphere), problems arising from the life-cycle (creation, collection, recording, distribution, processing, etc.) of information (especially ownership and copyright, digital divide, and digital rights). Information ethics is related to the fields of computer ethics and the philosophy of information.

Dilemmas regarding the life of information are becoming increasingly important in a society that is defined as "the information society". Information transmission and literacy are essential concerns in establishing an ethical foundation that promotes fair, equitable, and responsible practices. Information ethics broadly examines issues related to ownership, access, privacy, security, and community.

Information technology affects common issues such as copyright protection, intellectual freedom, accountability, privacy, and security. Many of these issues are difficult or impossible to resolve due to fundamental tensions between Western moral philosophies (based on rules, democracy, individual rights, and personal freedoms) and the traditional Eastern cultures (based on relationships, hierarchy, collective responsibilities, and social harmony). The multi-faceted dispute between Google and the government of the People's Republic of China reflects some of these fundamental tensions.

Professional codes offer a basis for making ethical decisions and applying ethical solutions to situations involving information provision and use which reflect an organization's commitment to responsible information service. Evolving information formats and needs require continual reconsideration of ethical principles and how these codes are applied. Considerations regarding information ethics influence "personal decisions, professional practice, and public policy". Therefore, ethical analysis must provide a framework to take into consideration "many, diverse domains" (ibid.) regarding how information is distributed.

BUSINESS STATISTICS (209)

Define 'Statistics' and give characteristics of 'Statistics'.

„Statistics" means numerical presentation of facts. Its meaning is divided into two forms - in plural form and in singular form.

Statistics" means a collection of numerical facts or data example price statistics, agricultural statistics, production statistics, etc. In singular form, the word means the statistical methods with the help of which collection, analysis and interpretation of data are accomplished.

Characteristics of Statistics - a) Aggregate of facts/data

b) Numerically expressed

c) Affected by different factors

d) Collected or estimated

e) Reasonable standard of accuracy

f) Predetermined purpose

g) Comparable

h) Systematic collection.

Therefore, the process of collecting, classifying, presenting, analyzing and interpreting the numerical facts, comparable for some predetermined purpose are collectively known as "Statistics".

What is meant by 'Data'?

Data refers to any group of measurements that happen to interest us. These measurements provide information the decision maker uses. Data are the foundation of any statistical investigation and the job of collecting data is the same for a statistician as collecting stone, mortar, cement, bricks etc. is for a builder.

Discuss the Scope of Statistics.

Ans.: The scope of statistics is much extensive. It can be divided into two parts **– (i)** Statistical Methods such as Collection, Classification, Tabulation, Presentation, Analysis, Interpretation and Forecasting.

(ii) Applied Statistics – It is further divided into three parts:

a) Descriptive Applied Statistics: Purpose of this analysis is to provide descriptive information.

b) Scientific Applied Statistics: Data are collected with the purpose of some scientific research and with the help of these data some particular theory or principle is propounded.

c) Business Applied Statistics: Under this branch statistical methods are used for the study, analysis and solution of various problems in the field of business.

State the limitation of statistics?

Scope of statistics is very wide. In any area where problems can be expressed in qualitative form, statistical methods can be used. But statistics have some limitations

1. Statistics can study only numerical or quantitative aspects of a problem.
2. Statistics deals with aggregates not with individuals.
3. Statistical results are true only on an average.
4. Statistical laws are not exact.
5. Statistics does not reveal the entire story.
6. Statistical relations do not necessarily bring out the cause and effect relationship between phenomena.

7. Statistics is collected with a given purpose.
8. Statistics can be used only by experts.

What do you mean by Collection of Data? Differentiate between Primary and Secondary Data.
Collection of data is the basic activity of statistical science. It means collection of facts and figures relating to particular phenomenon under the study of any problem whether it is in business economics, social or natural sciences. Such material can be obtained directly from the individual units, called **primary sources** or from the material published earlier elsewhere known as the **secondary sources**. Difference between Primary & Secondary Data. Primary Data Secondary Data **Basis nature** Primary data are original and are collected for the first time. SECONDARY Data which are collected earlier by someone else, and which are now in published or unpublished state. Collecting Agency these data are collected by the investigator himself. Secondary data were collected earlier by some other person. Post collection alterations these data do not need alteration as they are according to the requirement of the investigation. These have to be analyzed and necessary changes have to be made to make them useful as per the requirements of investing.

What is the meaning of Classification? Give objectives of Classification and essentials of an ideal classification.
Classification is the process of arranging data into various groups, classes and subclasses according to some common characteristics of separating them into different but related parts. Main objectives of Classification: -

(i) To make the data easy and precise
(ii) To facilitate comparison
(iii) Classified facts expose the cause-effect relationship.
(iv) To arrange the data in proper and systematic way
(v) The data can be presented in a proper tabular form only.

The two values which determine a class are known as class limits. First or the smaller one is known as lower limit (L1) and the greater one is known as upper limit (L2)

How many types of Series are there on the basis of Quantitative Classification? Give the difference between Exclusive and Inclusive Series.

(i) **Individual Series**: In individual series, the frequency of each item or value is only one for example; marks scored by 10 students of a class are written individually.

(ii)

different from each other by a different amount. For example: Daily wages 5 10 15 20 No. of workers 6 9 8 5

(iii) **Continuous Series:** When the number of items is placed within the limits of the class, the series obtained by classification of such data is known as continuous series.

For example Marks obtained 0-10 10-20 20-30 30-40 No. of students 10 18 22 25

Exclusive Series Inclusive Series Limits Upper limit of one class is equal to the lower limit of next class. The two limits are not equal. Inclusion The value equal to the upper limit is included in the next class. Both upper & lower limits are included in the same class. Conversion It does not require any conversion. Inclusive series is converted into exclusive series for calculation purpose. Statistical Methods 21 Suitability It is suitable in all situations. It is suitable only when the values are in integers.

What is Diagrammatic Representation? State the importance of Diagrams.

Depicting of statistical data in the form of attractive shapes such as bars, circles, and rectangles is called diagrammatic presentation. A diagram is a visual form of presentation of statistical data, highlighting their basic facts and relationship. There are geometrical figures like lines, bars, squares, rectangles, circles, curves, etc. Diagrams are used with great effectiveness in the presentation of all types of data. When properly constructed, they readily show information that might otherwise be lost amid the details of numerical tabulation.

Importance of Diagrams: A properly constructed diagram appeals to the eye as well as the mind since it is practical, clear and easily understandable even by those who are unacquainted with the methods of presentation. Utility or importance of diagrams will become clearer from the following points –

(i) **Attractive and Effective Means of Presentation:** Beautiful lines; full of various colours and signs attract human sight, and do not strain the mind of the observer. A common man who does not wish to indulge in figures, get message from a well prepared diagram.

(ii) **Make Data Simple and Understandable:** The mass of complex data, when prepared through diagram, can be understood easily. According to Shri Moraine, “Diagrams help us to understand the complete meaning of a complex numerical situation at one sight only”. Statistical Methods 25.

(iii) **Facilitate Comparison:** Diagrams make comparison possible between two sets of data of different periods, regions or other facts by putting side by side through diagrammatic presentation.

(iv) **Save Time and Energy:** The data which will take hours to understand becomes clear by just having a look at total facts represented through diagrams.

(v) **Universal Utility:** Because of its merits, the diagrams are used for presentation of statistical data in different areas. It is widely used technique in economic, business, administration, social and other areas.

(vi) **Helpful in Information Communication:** A diagram depicts more information than the data shown in a table. Information concerning data to general public becomes more easy through diagrams and gets into the mind of a person with ordinary knowledge.

What are the various types of graphs of frequency distribution?

Ans.: Frequency distribution can also be presented by means of graphs. Such graphs facilitate comparative study of two or more frequency distributions as regards their shape and pattern. The most commonly used graphs are as follows –

(i) Line frequency diagram
(ii) Histogram
(iii) Frequency Polygon
(iv) Frequency curves
(v) cumulative frequency curves or Ogine curves Line Frequency Diagram : This diagram is mostly used to depict discrete series on a graph. The values are shown on the X-axis and the frequencies on the Y axis. The lines are drawn vertically on X-axis against the relevant values taking the height equal to respective frequencies. Statistical Methods 31

Histogram : It is generally used for presenting continuous series. Class intervals are shown on X-axis and the frequencies on Y-axis. The data are plotted as a series of rectangles one over the other. The height of rectangle represents the frequency of that group. Each rectangle is joined with the other so as to give a continuous picture. Histogram is a graphic method of locating mode in continuous series. The rectangle of the highest frequency is treated as the rectangle in which mode lies. The top corner of this rectangle and the adjacent rectangles on both sides are joined diagonally. The point where two lines interact each other a perpendicular line is drawn on OX-axis. The point where the perpendicular line meets OX-axis is the value of mode.

Frequency Polygon : Frequency polygon is a graphical presentation of both discrete and continuous series. For a discrete frequency distribution, frequency polygon is obtained by plotting frequencies on Y-axis against the corresponding size of the variables on X-axis and then joining all the points ;by a straight line. In continuous series the mid-points of the top of each rectangle of histogram is joined by a straight line. To make the area of the frequency polygon equal to histogram, the line so drawn is stretched to meet the base line (X-axis) on both sides

. **Frequency Curve :** The curve derived by making smooth frequency polygon is called frequency curve. It is constructed by making smooth the lines of frequency polygon. This curve is drawn with a free hand so that its angularity disappears and the area of frequency curve remains equal to that of frequency polygon.

Cumulative Frequency Curve or Ogine Curve : This curve is a graphic presentation of the cumulative frequency distribution of continuous series. It can be of two types - (a) Less than Ogive and (b) More than Ogive.

Less than Ogive : This curve is obtained by plotting less than cumulative frequencies against the upper class limits of the respective classes. The points so obtained are joined by a straight line. It is an increasing curve sloping upward from left to right. More than Ogive : It is obtained by plotting „more than‟ cumulative frequencies against the lower class limits of the respective classes. The points so obtained are joined by a straight line to give „more than ogive‟. It is a decreasing curve which slopes downwards from left to right.

Measures of Central Tendency: Mean, Median, and Mode

A measure of central tendency is a summary statistic that represents the center point or typical value of a dataset. These measures indicate where most values in a distribution fall and are also referred to as the central location of a distribution. You can think of it as the tendency of data to cluster around a middle value. In statistics, the three most common measures of central tendency are the mean, median, and mode. Each of these measures calculates the location of the central point using a different method.

Mean

The mean is the arithmetic average, and it is probably the measure of central tendency that you are most familiar. Calculating the mean is very simple. You just add up all of the values and divide by the number of observations in your dataset.

$$\frac{x_1 + x_2 + \cdots + x_n}{n}$$

Arithmetic mean is a mathematical average and it is the most popular measures of central tendency. It is frequently referred to as 'mean' it is obtained by dividing sum of the values of all observations in a series (ΣX) by the number of items (N) constituting the series.

Thus, mean of a set of numbers X1, X2, X3,………..Xn denoted by $\bar{x}$ and is defined as

$$Mean = \frac{Sum\ of\ the\ items}{Number\ of\ the\ items} = \frac{\sum X}{N}$$

Example : Calculated the Arithmetic Mean DIRC Monthly Users Statistics in the University Library

Month	No. of Working Days	Total Users	Average Users per month
Sep-2011	24	11618	484.08
Oct-2011	21	8857	421.76
Nov-2011	23	11459	498.22
Dec-2011	25	8841	353.64
Jan-2012	24	5478	228.25
Feb-2012	23	10811	470.04
Total	**140**	**57064**	

$$\text{Mean} = \frac{\text{Total number of users}}{\text{Total number of working days}}$$

$$= \frac{\sum X}{N} = \frac{57064}{140} = \mathbf{407.6}$$

Advantages of Mean

- It is easy to understand & simple calculate.
- It is based on all the values.
- It is rigidly defined.
- It is easy to understand the arithmetic average even if some of the details of the data are lacking.
- It is not based on the position in the series.

Median

The median is the middle value. It is the value that splits the dataset in half. To find the median, order your data from smallest to largest, and then find the data point that has an equal amount of values above it and below it. The method for locating the median varies slightly depending on whether your dataset has an even or odd number of values. I'll show you how to find the median for both cases. In the examples below, I use whole numbers for simplicity, but you can have decimal places.

'Calculation of Median –Discrete series:

i. Arrange the data in ascending or descending order.
ii. Calculate the cumulative frequencies.
iii. Apply the formula.
iv.

$$Median(M) = Size\ of \left(\frac{N+1}{2}\right) th\ item$$

Calculation of median – Continuous series

For calculation of median in a continuous frequency distribution the following formula will be employed. Algebraically,

$$Median(M) = L1 + \frac{\frac{N}{2} - cf}{f} \times i$$

Example: Median of a set Grouped Data in a Distribution of Respondents by age

Age Group	Frequency of Median class(f)	Cumulative frequencies(cf)
0-20	15	15
20-40	32	47
40-60	54	101
60-80	30	131
80-100	19	150
Total	150	

$$\text{Median (M)} = 40 + \frac{\frac{150}{2} - 47}{54} \times 20$$

$$= 40 + \frac{75 - 47}{54} \times 20$$

$$= 40 + \frac{28}{54} X 20$$

$$= 40 + 0.52 X 20$$

$$= 40 + 10.37$$

$$= \mathbf{50.37}$$

Advantages of Median:

- Median can be calculated in all distributions.
- Median can be understood even by common people.
- Median can be ascertained even with the extreme items.
- It can be located graphically
- It is most useful dealing with qualitative data

Disadvantages of Median:

- It is not based on all the values.
- It is not capable of further mathematical treatment.
- It is affected fluctuation of sampling.
- In case of even no. of values it may not the value from the data.

Mode

The mode is the value that occurs the most frequently in your data set. On a bar chart, the mode is the highest bar. If the data have multiple values that are tied for occurring the most frequently, you have a multimodal distribution. If no value repeats, the data do not have a mode.

- Mode is the most frequent value or score in the distribution.
- It is defined as that value of the item in a series.
- It is denoted by the capital letter Z.
- highest point of the frequencies

Croxton and Cowden: defined it as “the mode of a distribution is the value at the point armed with the item tends to most heavily concentrated. It may be regarded as the most typical of a series of value”
The exact value of mode can be obtained by the following formula.

$$Z=L_1+\frac{f1-f0}{2f1-f0-f2}\times i$$

Example: Calculate Mode for the distribution of monthly rent Paid by Libraries in Karnataka

Monthly rent (Rs)	**Number of Libraries (f)**
500-1000	5
1000-1500	10
1500-2000	8
2000-2500	16
2500-3000	14
3000 & Above	12
Total	65

$$Z=2000+\frac{16-8}{2(16)-8-14}\times 500$$

$$Z=2000+\frac{8}{32-8-14}X500$$

$$Z=2000+\frac{8}{10}\times 500$$

$$Z=2000+0.8\times 500=400$$

$$Z=2400$$

Advantages of Mode:

- Mode is readily comprehensible and easily calculated
- It is the best representative of data
- It is not at all affected by extreme value.
- The value of mode can also be determined graphically.
- It is usually an actual value of an important part of the series.

Disadvantages of Mode:

- It is not based on all observations.
- It is not capable of further mathematical manipulation.
- Mode is affected to a great extent by sampling fluctuations.
- Choice of grouping has great influence on the value of mode.

Conclusion

- A measure of central tendency is a measure that tells us where the middle of a bunch of data lies. Mean is the most common measure of central tendency. It is simply the sum of the numbers divided by the number of numbers in a set of data. This is also known as average.
- Median is the number present in the middle when the numbers in a set of data are arranged in ascending or descending order. If the number of numbers in a data set is even, then the median is the mean of the two middle numbers.
- Mode is the value that occurs most frequently in a set of data.

Which is Best—the Mean, Median, or Mode?

When you have a symmetrical distribution for continuous data, the mean, median, and mode are equal. In this case, analysts tend to use the mean because it includes all of the data in the calculations. However, if you have a skewed distribution, the median is often the best measure of central tendency.

What is a Quartile?

Whenever we have an observation and we wish to divide it, there is a chance to do it in different ways. So, we use the ***median*** when a given observation is divided into two parts that are equal. Likewise, quartiles are values that divide a complete given set of observations into four equal parts.

Basically, there are three types of quartiles, first quartile, second quartile, and third quartile. The other name for the first quartile is lower quartile. The representation of the first quartile is ‘Q_1.’ The other name for the second quartile is median. The representation of the second quartile is by ‘Q_2.‘ The other name for the third quartile is the upper quartile. The representation of the third quartile is by ‘Q_3.’

- **First Quartile** is generally the one-fourth of any sort of observation. However, the point to note here is, this one-fourth value is always less than or equal to ‘Q_1.’ Similarly, it goes for the values of ‘Q_2‘ and ‘Q3.’

What are Deciles?

Deciles are those values that divide any set of a given observation into a total of ten equal parts. Therefore, there are a total of nine deciles. These representation of these deciles are as follows – D_1, D_2, D_3, D_4, ……… D_9.

D_1 is the typical peak value for which one-tenth (1/10) of any given observation is either less or equal to D_1. However, the remaining nine-tenths(9/10) of the same observation is either greater than or equal to the value of D_1.

What do you mean by Percentiles?

Last but not the least, comes the percentiles. The other name for percentiles is *centiles.* A centile or a percentile basically divide any given observation into a total of 100 equal parts. The representation of these percentiles or centiles is given as – P_1, P_2, P_3, P_4, ……… P_{99}.

P_1 is the typical peak value for which one-hundredth (1/100) of any given observation is either less or equal to P_1. However, the remaining ninety-nine-hundredth(99/100) of the same observation is either greater than or equal to the value of P_1. This takes place once all the given observations are arranged in a specific manner i.e. ascending order.

So, in case the data we have doesn’t have a proper classification, then the representation of p^{th} quartile is **(n + 1)p^{th}**

Here,

n = total number of observations.

p = 1/4, 2/4, 3/4 for different values of Q_1, Q_2, and Q_3 respectively.

p = 1/10, 2/10, …. 9/10 for different values of D_1, D_2, …… D_9 respectively.

p = 1/100, 2/100, ….. 99/100 for different values of P_1, P_2, ……… P_{99} respectively.

Formula

At times, the grouping of frequency distribution takes place. For which, we use the following formula during the computation:

$Q = l_1 + [(N_p - N_i)/(N_u - N_i)] * C$

Here,

l_1 = lower class boundary of the specific class that contains the median.
N_i = less than the cumulative frequency in correspondence to **l_1** (Post Median Class)
N_u = less than the cumulative frequency in correspondence to **l_2** (Pre Median Class)
C = Length of the median class (**$l_2 - l_1$**)

The symbol 'p' has its usual value. The value of 'p' varies completely depending on the type of quartile. There are different ways to find values or quartiles. We use this way in a grouped frequency distribution. The best way to do it is by drawing an *ogive* for the present frequency distribution.

Hence, all that we need to do to find one specific quartile is, find the point and draw a horizontal axis through the same. This horizontal line must pass through N_p. The next step is to draw a perpendicular. The perpendicular comes up from the same point of intersection of the ogive and the horizontal line. Hence, the value of the quartile comes from the value of 'x' of the given perpendicular line.

Solved Questions for You!

Question: Here are the wages of some laborers: Rs. 82, Rs. 56, Rs. 120, Rs. 75, Rs. 80, Rs. 75, Rs. 90, Rs. 50, Rs. 130, Rs. 65. Find the values of Q_1, D_6, and P_{82}.

Solution: The wages in ascending order – Rs. 50, Rs. 56, Rs. 65, Rs. 75, Rs. 75, Rs. 80, Rs. 90, R 82, Rs. 90, Rs. 120, Rs. 130

So,

Q_1 = (n + 1)/4 th value
= 2.75th value where n = 10
= 2nd value + 0.75*difference between the 3rd and 2nd value
= Rs. 62.75

D_1 = (15 + 1) * 6/10 th value
= 6.60th value
= 6th value + 0.60*difference between the 7th and 6th values
= Rs. 81.20

P_1 = (10 + 1) * 82/100th value
= 9.02th value
= 9th value + 0.02*difference b/w the 10th and 9th values
= Rs. 120.20

Measures of Variability/MEASURES OF DISPERSION

A measure of variability is a summary statistic that represents the amount of dispersion in a dataset. How spread out are the values? While a measure of central tendency describes the typical value, measures of variability define how far away the data points tend to fall from the center. We talk about variability in the context of a distribution of values. A low dispersion indicates that the data points tend to be clustered tightly around the center. High dispersion signifies that they tend to fall further away.

In statistics, variability, dispersion, and spread are synonyms that denote the width of the distribution. Just as there are multiple measures of central tendency, there are several measures of variability. In this blog post, you'll learn why understanding the variability of your data is critical. Then, I explore the most common measures of variability—the range, interquartile range, variance, and standard deviation. I'll help you determine which one is best for your data.

INTRODUCTION

The Measures of central tendency gives us a birds eye view of the entire data they are called averages of the first order, it serve to locate the centre of the distribution but they do not reveal how the items are spread out on either side of the central value. The measure of the scattering of items in a distribution about the average is called dispersion

- Dispersion measures the extent to which the items vary from some central value. It may be noted that the measures of dispersion or variation measure only the degree but not the direction of the variation. The measures of dispersion are also called averages of the second order because they are based on the deviations of the different values from the mean or other measures of central tendency which are called averages of the first order.

DEFINITION

- In the words of Bowley "Dispersion is the measure of the variation of the items"

According to Conar "Dispersion is a measure of the extent to which the individual items vary"

- Range
- Quartile Deviation
- Mean Deviation
- Standard Deviation

RANGE

Let's start with the range because it is the most straightforward measure of variability to calculate and the simplest to understand. The range of a dataset is the difference between the largest and smallest values in that dataset.

- It is defined as the difference between the smallest and the largest observations in a given set of data.
- Formula is R = L – S
- Ex. Find out the range of the given distribution: 1, 3, 5, 9, 11
- The range is 11 – 1 = 10.

For example, in the two datasets below, dataset 1 has a range of 20 – 38 = 18 while dataset 2 has a range of 11 – 52 = 41. Dataset 2 has a broader range and, hence, more variability than dataset 1.

Dataset 1	Dataset 2
20	11
21	16
22	19
25	23
26	25
29	32
33	39
34	46
38	52

While the range is easy to understand, it is based on only the two most extreme values in the dataset, which makes it very susceptible to outliers. If one of those numbers is unusually high or low, it affects the entire range even if it is atypical.

Additionally, the size of the dataset affects the range. In general, you are less likely to observe extreme values. However, as you increase the sample size, you have more opportunities to obtain these extreme values. Consequently, when you draw random samples from the same population, the range tends to increase as the sample size increases. Consequently, use the range to compare variability only when the sample sizes are similar.

QUARTILE DEVIATION

- It is the second measure of dispersion, no doubt improved version over the range. It is based on the quartiles so while calculating this may require upper quartile (Q3) and lower quartile (Q1) and then is divided by 2. Hence it is half of the deference between two quartiles it is also a semi inter quartile range.

The formula of Quartile Deviation is

- $(Q\ D) = \frac{Q3 - Q1}{2}$

MEAN DEVIATION

Mean Deviation is also known as average deviation. In this case deviation taken from any average especially Mean, Median or Mode. While taking deviation we have to ignore negative items and consider all of them as positive. The formula is given below

The formula of MD is given below

$MD = \frac{\Sigma d}{N}$ (deviation taken from mean)

$MD = \frac{\Sigma m}{N}$ (deviation taken from median)

$MD = \frac{\Sigma z}{N}$ (deviation taken from mode)

Find the mean of all values ... use it to work out distances ... then find the mean of those distances!

In three steps:

- 1. Find the mean of all values
- 2. Find the **distance** of each value from that mean (subtract the mean from each value, ignore minus signs)
- 3. Then find the **mean of those distances**

Like this:

Example: the Mean Deviation of 3, 6, 6, 7, 8, 11, 15, 16

Step 1: Find the **mean**:

Mean = 3 + 6 + 6 + 7 + 8 + 11 + 15 + 168 = 728 = 9

Step 2: Find the **distance** of each value from that mean:

Value	Distance from 9
3	6
6	3
6	3
7	2

8	1
11	2
15	6
16	7

Which looks like this:

(No minus signs!)

Step 3. Find the **mean of those distances**:

Mean Deviation = *6 + 3 + 3 + 2 + 1 + 2 + 6 + 7***8** = *30***8** = **3.75**

So, the **mean = 9**, and the **mean deviation = 3.75**

It tells us how far, on average, all values are from the middle.

In that example the values are, on average, 3.75 away from the middle.

The Interquartile Range (IQR) . . . and other Percentiles

The interquartile range is the middle half of the data. To visualize it, think about the median value that splits the dataset in half. Similarly, you can divide the data into quarters. Statisticians refer to these quarters as quartiles and denote them from low to high as Q1, Q2, and Q3. The lowest quartile (Q1) contains the quarter of the dataset with the smallest values. The upper quartile (Q4) contains the quarter of the dataset with the highest values. The interquartile range is the middle half of the data that is in between the upper and lower quartiles. In other words, the interquartile range includes the 50% of data points that fall between Q1 and Q3.

STANDARD DEVIATION

- The concept of standard deviation was first introduced by Karl Pearson in 1893. The standard deviation is the most useful and the most popular measure of dispersion. Just as the arithmetic mean is the most of all the averages, the standard deviation is the best of all measures of dispersion.
- The standard deviation is represented by the Greek letter (sigma). It is always calculated from the arithmetic mean, median and mode is not considered. While looking at the earlier measures of dispersion all of them suffer from one or the other demerit i.e.
- Range –it suffer from a serious drawback considers only 2 values and neglects all the other values of the series.
- Quartile deviation considers only 50% of the item and ignores the other 50% of items in the series.
- Mean deviation no doubt an improved measure but ignores negative signs without any basis.
- Karl Pearson after observing all these things has given us a more scientific formula for calculating or measuring dispersion. While calculating SD we take deviations of individual observations from their AM and then each squares. The sum of the squares is divided by the number of observations. The square root of this sum is knows as standard deviation.

MERITS OF STANDARD DEVIATION

- Very popular scientific measure of dispersion
- From SD we can calculate Skewness, Correlation etc
- It considers all the items of the series
- The squaring of deviations makes them positive and the difficulty about algebraic signs which was expressed in case of mean deviation is not found here.

DEMERITS OF STANDARD DEVIATION

- Calculation is difficult not as easier as Range and QD
- It always depends on AM
- Extreme items gain great importance

The formula of SD is $= \sqrt{\frac{\sum d2}{N}}$

Problem: Calculate Standard Deviation of the following series

X – 40, 44, 54, 60, 62, 64, 70, 80, 90, 96

NO OF YOUNG ADULTS VISIT TO THE LIBRARY IN 10 DAYS (X)	d=X - A.M	d2
40	-26	676
44	-22	484
54	-12	144
60	-6	36
62	-4	16
64	-2	4
70	4	16
80	14	196
90	24	596
96	30	900
N=10 ΣX=660		Σd2 = 3048

- AM = $\frac{\Sigma X}{N}$
- = $\frac{660}{10}$ = 66 AM
-

SD = $\sqrt{\frac{\sum d2}{N}}$

SD = $\sqrt{3048}$ = 17.46

Overview of how to calculate standard deviation

The formula for standard deviation (SD) is

where \sum∑sum means "sum of", xxx is a value in the data set, \mu$\mu$mu is the mean of the data set, and NNN is the number of data points in the population.

The standard deviation formula may look confusing, but it will make sense after we break it down. In the coming sections, we'll walk through a step-by-step interactive example. Here's a quick preview of the steps we're about to follow:

Step 1: Find the mean.

Step 2: For each data point, find the square of its distance to the mean.

Step 3: Sum the values from Step 2.

Step 4: Divide by the number of data points.

Step 5: Take the square root.

Correlation & Regression

Correlation

Finding the relationship between two quantitative variables without being able to infer causal relationships

Correlation is a statistical technique used to determine the degree to which two variables are related

Correlation refers to a process for establishing whether or not relationships exist between two variables. You learned that a way to get a general idea about whether or not two variables are related is to plot them on a “scatter plot”. While there are many measures of association for variables which are measured at the ordinal or higher level of measurement, correlation is the most commonly used approach. This section shows how to calculate and interpret correlation coefficients for ordinal and interval level scales. Methods of correlation summarize the relationship between two variables in a single number called the correlation coefficient. The correlation coefficient is usually given the symbol r and it ranges from -1 to +1.

Correlation Coefficient

The correlation coefficient, r, is a summary measure that describes the extent of the statistical relationship between two interval or ratio level variables. The correlation coefficient is scaled so that it is always between -1 and +1. When r is close to 0 this means that there is little relationship between the variables and the farther away from 0 r is, in either the positive or negative direction, the greater the relationship between the two variables.

The two variables are often given the symbols X and Y. In order to illustrate how the two variables are related, the values of X and Y are pictured by drawing the scatter diagram, graphing combinations of the two variables. The scatter diagram is given first, and then the method of determining Pearson's r is presented. In presenting the following examples, relatively small sample sizes are given. Later, data from larger samples are given.

Scatter Diagram

A scatter diagram is a diagram that shows the values of two variables X and Y , along with the way in which these two variables relate to each other. The values of variable X are given along the horizontal axis, with the values of the variable Y given on the vertical axis. For purposes of drawing a scatter diagram, and determining the correlation coefficient, it does not matter which of the two variables is the X variable, and which is Y.

Later, when the regression model is used, one of the variables is defined as an independent variable, and the other is defined as a dependent variable. In regression, the independent variable X is considered to have some effect or influence on the dependent variable Y. Correlation methods are symmetric with respect to the two variables, with no indication of causation or direction of influence being part of the statistical consideration. A scatter diagram is given in the following example. The same example is later used to determine the correlation coefficient.

Types of Correlation

The scatter plot explains the correlation between the two attributes or variables. It represents how closely the two variables are connected. There can be three such situations to see the relation between the two variables –

- Positive Correlation – when the value of one variable increases with respect to another.
- Negative Correlation – when the value of one variable decreases with respect to another.

No Correlation – when there is no linear dependence or no relation between the two variables.

Types of correlation

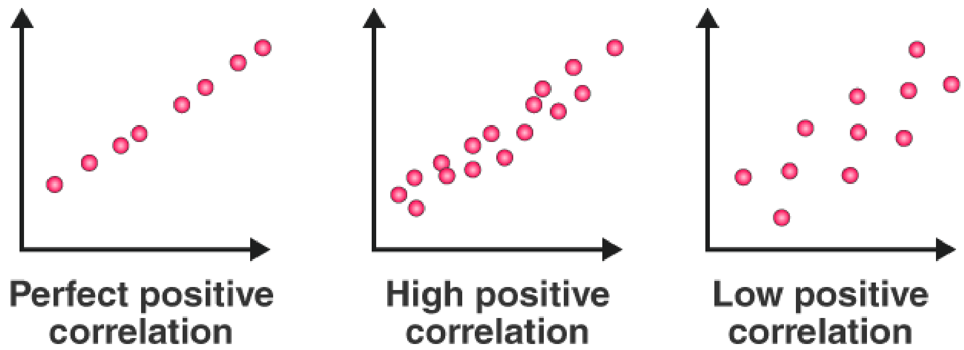
The scatter plot explains the correlation between two attributes or variables. It represents how closely the two variables are connected. There can be three such situations to see the relation between the two variables –

1. Positive Correlation
2. Negative Correlation
3. No Correlation

Positive Correlation

When the points in the graph are rising, moving from left to right, then the scatter plot shows a positive correlation. It means the values of one variable are increasing with respect to another. Now positive correlation can further be classified into three categories:

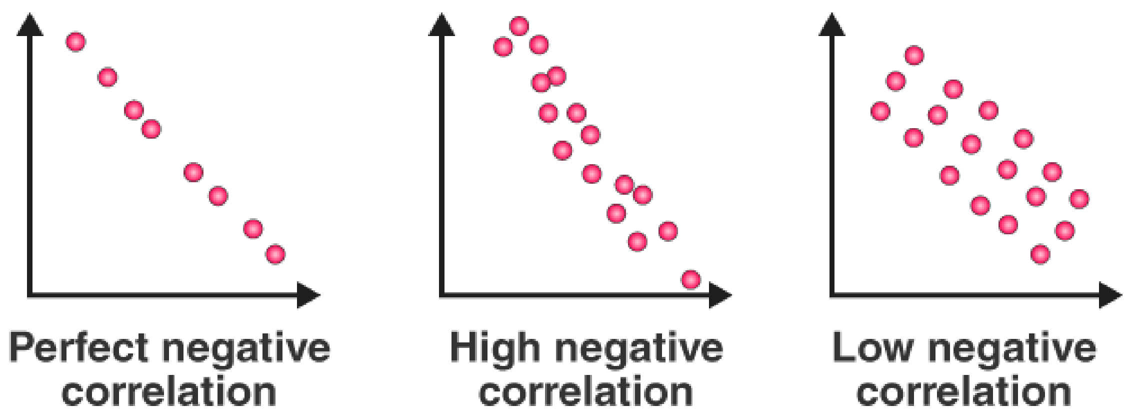
- **Perfect Positive** – Which represents a perfectly straight line
- **High Positive** – All points are nearby
- **Low Positive** – When all the points are scattered



Negative Correlation

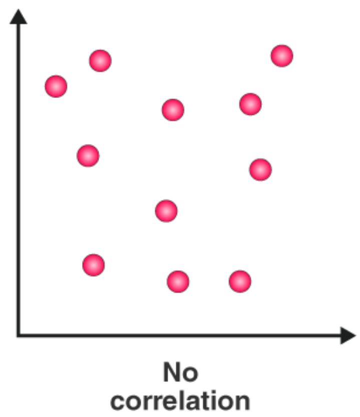
When the points in the scatter graph fall while moving left to right, then it is called a negative correlation. It means the values of one variable are decreasing with respect to another. These are also of three types:

- **Perfect Negative** – Which form almost a straight line
- **High Negative** – When points are near to one another
- **Low Negative** – When points are in scattered form



No Correlation

When the points are scattered all over the graph and it is difficult to conclude whether the values are increasing or decreasing, then there is no correlation between the variables.

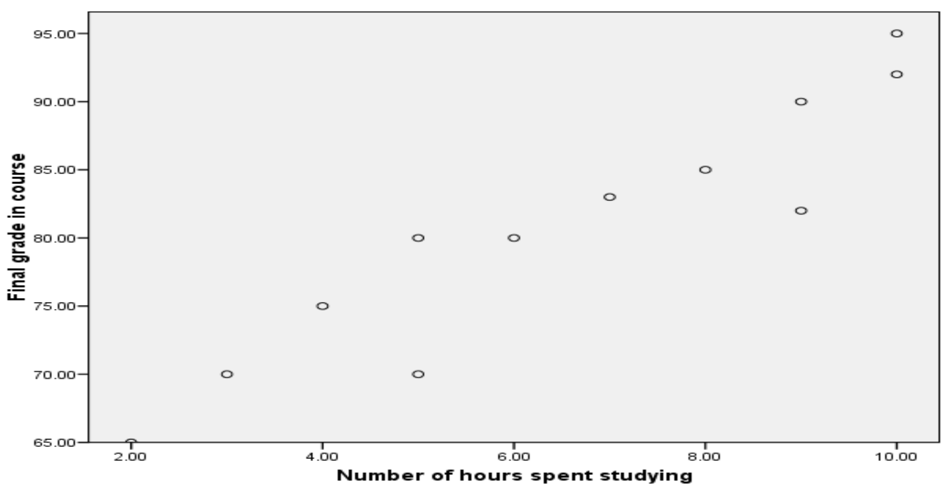


Scatter plots

The pattern of data is indicative of the type of relationship between your two variables:

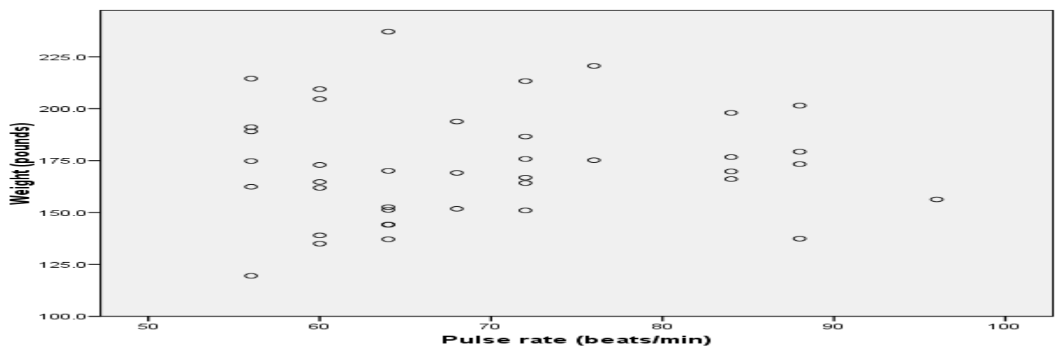
- positive relationship
- negative relationship
- no relationship

Positive relationship



Negative relationship

No relation

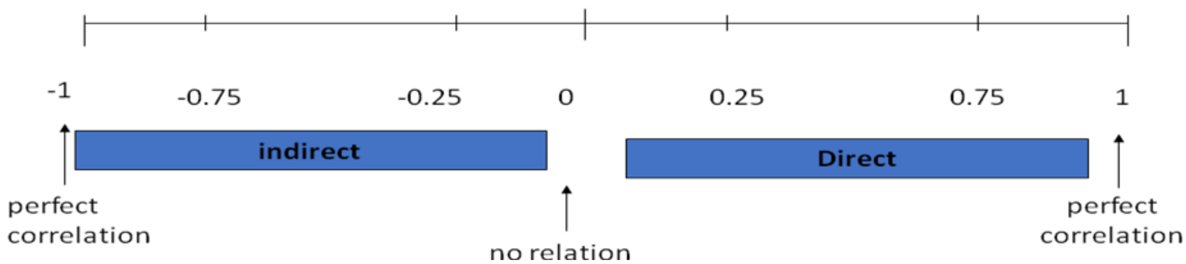


Correlation Coefficient

Statistic showing the degree of relation between two variables

Simple Correlation coefficient (r)

- It is also called Pearson's correlation or product moment correlation coefficient.
- It measures the nature and strength between two variables of the quantitative type.
- The sign of r denotes the nature of association
- while the value of r denotes the strength of association.
- If the sign is +ve this means the relation is direct (an increase in one variable is associated with an increase in the other variable and a decrease in one variable is associated with a decrease in the other variable).
- While if the sign is -ve this means an inverse or indirect relationship (which means an increase in one variable is associated with a decrease in the other).
- The value of r ranges between (-1) and (+1)
- The value of r denotes the strength of the association as illustrated by the following diagram.



- **If r = Zero this means no association or correlation between the two variables.**
- **If 0 < r < 0.25 = weak correlation.**
- **If 0.25 ≤ r < 0.75 = intermediate correlation.**
- **If 0.75 ≤ r < 1 = strong correlation.**
- **If r = l = perfect correlation.**

How to compute the simple correlation coefficient (r)

A sample of 6 children was selected, data about their age in years and weight in kilograms was recorded as shown in the following table. It is required to find the correlation between age and weight.

serial No	Age (years)	Weight (Kg)
1	7	12
2	6	8
3	8	12
4	5	10
5	6	11
6	9	13

These 2 variables are of the quantitative type, one variable (Age) is called the independent and denoted as (X) variable and the other (weight) is called the dependent and denoted as (Y) variables.

To find the relation between age and weight compute the simple correlation coefficient using the following formula:

r = 0.759

Strong direct correlation

EXAMPLE: Relationship between Anxiety and Test Scores

Anxiety (X)	Test score (Y)	X^2	Y^2	XY
10	2	100	4	20
8	3	64	9	24
2	9	4	81	18
1	7	1	49	7
5	6	25	36	30
6	5	36	25	30
$\sum X = 32$	$\sum Y = 32$	$\sum X^2 = 230$	$\sum Y^2 = 204$	$\sum XY=129$

r = - 0.94

Indirect strong correlation

Spearman Rank Correlation Coefficient (r_s)

- It is a non-parametric measure of correlation.
- This procedure makes use of the two sets of ranks that may be assigned to the sample values of x and Y.
- Spearman Rank correlation coefficient could be computed in the following cases:
  - Both variables are quantitative.
  - Both variables are qualitative ordinal.
  - One variable is quantitative and the other is qualitative ordinal.

Procedure:

1. Rank the values of X from 1 to n where n is the numbers of pairs of values of X and Y in the sample.
2. Rank the values of Y from 1 to n.
3. Compute the value of di for each pair of observation by subtracting the rank of Yi from the rank of Xi
4. Square each di and compute ∑di2 which is the sum of the squared values.
5. The value of r_s denotes the magnitude and nature of association giving the same interpretation as simple r.

Example - **In a study of the relationship between level education and income the following data was obtained. Find the relationship between them and comment**

sample numbers	level education (X)	Income (Y)
A	Preparatory.	25
B	Primary.	10
C	University.	8
D	secondary	10
E	secondary	15
F	illiterate	50
G	University.	60

Answer:

$\sum di^2=64$

Comment:

There is an indirect weak correlation between level of education and income

Regression Analyses

- Regression: technique concerned with predicting some variables by knowing others
- The process of predicting variable Y using variable X

Regression

- Uses a variable (x) to predict some outcome variable (y)

Tells you how values in y change as a function of changes in values of x

Correlation and Regression

- Correlation describes the strength of a linear relationship between two variables
- Linear means “straight line”
- Regression tells us how to draw the straight line described by the correlation

- Calculates the “best-fit” line for a certain set of data

The regression line makes the sum of the squares of the residuals smaller than for any other line

Regression minimizes residuals

Exercise

A sample of 6 persons was selected the value of their age (x variable) and their weight is demonstrated in the following table. Find the regression equation and what is the predicted weight when age is 8.5 years

Serial no.	Age (x)	Weight (y)
1	7	12
2	6	8
3	8	12
4	5	10
5	6	11
6	9	13

Answer

$$\bar{x} = \frac{41}{6} = 6.83 \qquad \bar{y} = \frac{66}{6} = 11$$

$$b = \frac{461 - \frac{41 \times 66}{6}}{291 - \frac{(41)^2}{6}} = 0.92$$

Regression equation

$$\hat{y}_{(x)} = 11 + 0.9(x - 6.83)$$

$$\hat{y}_{(x)} = 4.675 + 0.92x \qquad \hat{y}_{(8.5)} = 4.675 + 0.92 * 8.5 = 12.50\text{Kg}$$

- Find the correlation between age and blood pressure using simple and Spearman's correlation coefficients, and comment.
- Find the regression equation?
- What is the predicted blood pressure for a man aging 25 years?

Serial	x	y	xy	x2
1	20	120	2400	400
2	43	128	5504	1849
3	63	141	8883	3969

4	26	126	3276	676
5	53	134	7102	2809
6	31	128	3968	961
7	58	136	7888	3364
8	46	132	6072	2116
9	58	140	8120	3364
10	70	144	10080	4900

$$\frac{114486 - \frac{852 \times 2630}{20}}{41678 - \frac{852^2}{20}} = 0.4547$$

$\hat{y}$ =112.13 + 0.4547 x

for age 25

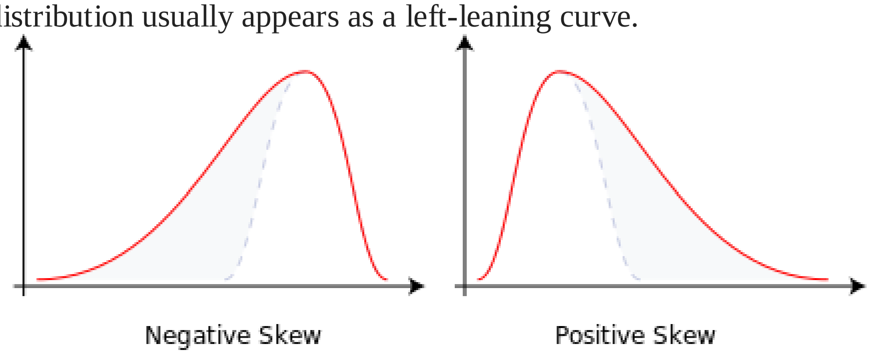
B.P = 112.13 + 0.4547 * 25=123.49 = 123.5 mm hg

Skewness

Consider the two distributions in the figure just below. Within each graph, the values on the right side of the distribution taper differently from the values on the left side. These tapering sides are called *tails*, and they provide a visual means to determine which of the two kinds of skewness a distribution has:

1. **Negative skew**: The left tail is longer; the mass of the distribution is concentrated on the right of the figure. The distribution is said to be left-skewed, left-tailed, or skewed to the left, despite the fact that the curve itself appears to be skewed or leaning to the right; left instead refers to the left tail being drawn out and, often, the mean being skewed to the left of a typical center of the data. A left-skewed distribution usually appears as a right-leaning curve.

2. **Positive skew:** The right tail is longer; the mass of the distribution is concentrated on the left of the figure. The distribution is said to be right-skewed, right-tailed, or skewed to the right, despite the fact that the curve itself appears to be skewed or leaning to the left; right instead refers to the right tail being drawn out and, often, the mean being skewed to the right of a typical center of the data. A right-skewed distribution usually appears as a left-leaning curve.



Relationship of mean and median

The skewness is not directly related to the relationship between the mean and median: a distribution with negative skew can have its mean greater than or less than the median, and likewise for positive skew.[2]

In the older notion of nonparametric skew, defined as where is the mean, is the median,

and is the standard deviation, the skewness is defined in terms of this relationship: positive/right nonparametric skew means the mean is greater than (to the right of) the median, while negative/left nonparametric skew means the mean is less than (to the left of) the median. However, the modern definition of skewness and the traditional nonparametric definition do not in general have the same sign: while they agree for some families of distributions, they differ in general, and conflating them is misleading.

If the distribution is symmetric, then the mean is equal to the median, and the distribution has zero skewness.[3] If the distribution is both symmetric and unimodal, then the mean = median = mode. This is the case of a coin toss or the series 1,2,3,4,... Note, however, that the converse is not true in general, i.e. zero skewness does not imply that the mean is equal to the median.

A 2005 journal article points out:[2]

Many textbooks teach a rule of thumb stating that the mean is right of the median under right skew, and left of the median under left skew. This rule fails with surprising frequency. It can fail in multimodal distributions, or in distributions where one tail is long but the other is heavy. Most commonly, though, the rule fails in discrete distributions where the areas to the left and right of the median are not equal. Such distributions not only contradict the textbook relationship between mean, median, and skew, they also contradict the textbook interpretation of the median.

Definition

Pearson's moment coefficient of skewness

The skewness of a random variable X is the third standardized moment γ_1, defined as

Where μ is the mean, σ is the standard deviation, E is the expectation operator, μ_3 is the third central moment, and κ_t are the t-th cumulants. It is sometimes referred to as **Pearson's moment coefficient of skewness**, or simply the **moment coefficient of skewness**,[4] but should not be confused with Pearson's other skewness statistics (see below). The last equality expresses skewness in terms of the ratio of the third cumulant κ_3 to the 1.5th power of the second cumulant κ_2. This is analogous to the definition of kurtosis as the fourth cumulant normalized by the square of the second cumulant. The skewness is also sometimes denoted Skew[X].

If σ is finite, μ is finite too and skewness can be expressed in terms of the non-central moment E[X^3] by expanding the previous formula,

Correlation

-

Correlation Formula

Correlation shows the relation between two variables. Correlation coefficient shows the measure of correlation. To compare two datasets we use the correlation formulas.

Pearson Correlation Coefficient Formula

The most common formula is the Pearson Correlation coefficient used for linear dependency between the data set. The value of the coefficient lies between -1 to +1. When the coefficient comes down to zero, then the data is considered as not related. While, if we get the value of +1, then the data are positively correlated and -1 has a negative correlation.

$$r = \frac{n(\sum xy) - (\sum x)(\sum y)}{\sqrt{[n\sum x^2 - (\sum x)^2][n\sum y^2 - (\sum y)^2]}}$$

Where, n = Quantity of Information
Σx = Total of the First Variable Value
Σy = Total of the Second Variable Value
Σxy = Sum of the Product of & Second Value
Σx^2 = Sum of the Squares of the First Value
Σy^2 = Sum of the Squares of the Second Value

Correlation coefficient formula is given and explained here for all of its types. There are various formulas to calculate the correlation coefficient and the ones covered here include Pearson's Correlation Coefficient Formula, Linear Correlation Coefficient Formula, Sample Correlation Coefficient Formula, and Population Correlation Coefficient Formula. Before going to the formulas, it is important to understand what correlation and correlation coefficient is. A brief introduction is given below and to learn about them in detail, click the linked article.

Formula to Calculate Correlation Coefficient
About Correlation Coefficient
The correlation coefficient is a measure of the association between two variables. It is used to find the relationship is between data and a measure to check how strong it is. The formulas return a value between -1 and 1 wherein one shows -1 shows negative correlation and +1 shows a positive correlation.
The correlation coefficient value is positive when it shows that there is a correlation between the two values and the negative value shows the amount of diversity among the two values.

Correlation Analysis
Correlation analysis is applied in quantifying the association between two continuous variables, for example, an dependent and independent variable or among two independent variables.
Regression Analysis
Regression analysis refers to assessing the relationship between the outcome variable and one or more variables. The outcome variable is known as the dependent or response variable and the risk elements, and cofounders are known as predictors or independent variables. The dependent variable is shown by "y" and independent variables are shown by "x" in regression analysis.
The sample of a correlation coefficient is estimated in the correlation analysis. It ranges between -1 and +1, denoted by r and quantifies the strength and direction of the linear association among two variables.

The correlation among two variables can either be positive, i.e, a higher level of one variable is related to a higher level of another) or negative, i.e, a higher level of one variable is related to a lower level of the other.

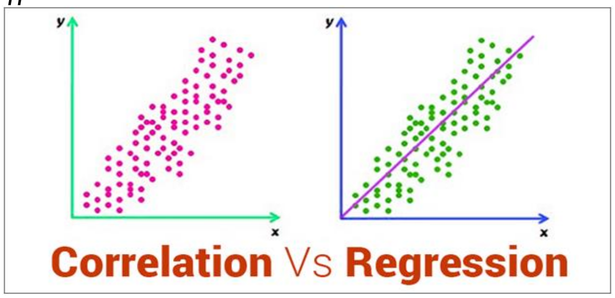
The sign of the coefficient of correlation shows the direction of the association. The magnitude of the coefficient shows the strength of the association.

For example, a correlation of r = 0.8 indicates a positive and strong association among two variables, while a correlation of r = -0.3 shows a negative and weak association. A correlation near to zero shows the non-existence of linear association among two continuous variables.

Linear Regression

Linear regression is a linear approach to modelling the relationship between the scalar components and one or more independent variables. If the regression has one independent variable, then it is known as a simple linear regression. If it has more than one independent variables, then it is known as multiple linear regression. Linear regression only focuses on the conditional probability distribution of the given values rather than the joint probability distribution. In general, all the real world regressions models involve multiple predictors. So, the term linear regression often describes multivariate linear regression.

Correlation and Regression Differences



There are some differences between Correlation and regression.

- Correlation shows the quantity of the degree to which two variables are associated. It does not fix a line through the data points. You compute a correlation that shows how much one variable changes when the other remains constant. When r is 0.0, the relationship does not exist. When r is positive, one variable goes high as the other one. When r is negative, one variable goes high as the other goes down.
- Linear regression finds the best line that predicts y from x, but Correlation does not fit a line.
- Correlation is used when you measure both variables, while linear regression is mostly applied when x is a variable that is manipulated.

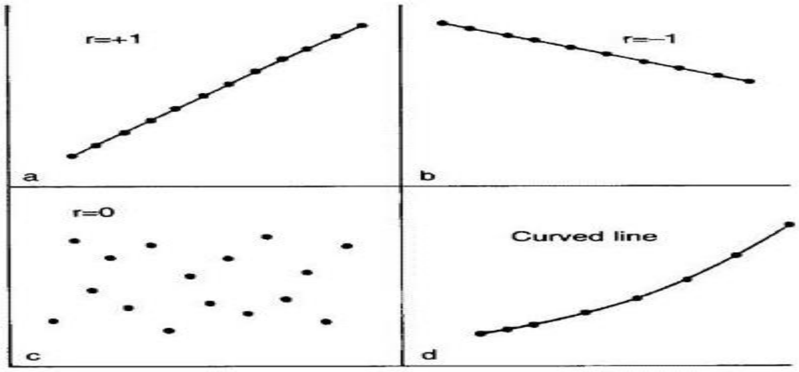
Comparison Between Correlation and Regression

Basis	**Correlation**	**Regression**
Meaning	A statistical measure that defines co-relationship or association of two variables.	Describes how an independent variable is associated with the dependent variable.
Dependent and Independent variables	No difference	Both variables are different.
Usage	To describe a linear relationship between two variables.	To fit the best line and estimate one variable based on another variable.

Objective	To find a value expressing the relationship between variables.	To estimate values of a random variable based on the values of a fixed variable.

Correlation and Regression Statistics

The degree of association is measured by “r” after its originator and a measure of linear association. Other complicated measures are used if a curved line is needed to represent the relationship.



The above graph represents the correlation.

The coefficient of correlation is measured on a scale that varies from +1 to -1 through 0. The complete correlation among two variables is represented by either +1 or -1. The correlation is positive when one variable increases and so does the other; while it is negative when one decreases as the other increases. The absence of correlation is described by 0.

Index Numbers

<u>Contents</u>

- Introduction
- Definition
- Characteristics
- Uses
- Problems
- Classification
- Methods
- Value index numbers
- Chain index numbers.

INTRODUCTION

- An index number measures the relative change in price, quantity, value, or some other item of interest from one time period to another.
- A simple index number measures the relative change in one or more than one variable.

Characteristics, Types, Importance and Limitations

Meaning of Index Numbers:

The value of money does not remain constant over time. It rises or falls and is inversely related to the changes in the price level. A rise in the price level means a fall in the value of money and a fall in the price level means a rise in the value of money. Thus, changes in the value of money are reflected by the changes in the general level of prices over a period of time. Changes in the general level of prices can be measured by a statistical device known as 'index number.'

Index number is a technique of measuring changes in a variable or group of variables with respect to time, geographical location or other characteristics. There can be various types of index numbers, but, in the present context, we are concerned with price index numbers, which measures changes in the general price level (or in the value of money) over a period of time.

CLASSIFICATION OF INDEX NUMBERS

- *Price Index*
- *Quantity Index*
- *Value Index*
- *Composite Index*

METHODS OF CONSTRUCTING INDEX NUMBERS

- *Index Numbers*
- *Simple Aggregative*
- *Simple Average of Price Relative*
- *Unweighted*
- *Weighted*
- *Weighted Aggregated*
- *Weighted Average of Price Relatives*

SIMPLE AGGREGATIVE METHOD

It consists in expressing the aggregate price of all commodities in the current year as a percentage of the aggregate price in the base year.

$$P_{01} = \frac{\sum p_1}{\sum p_0} \times 100$$

P01= Index number of the current year.

= Total of the current year's price of all commodities.

= Total of the base year's price of all commodities.

<u>EXAMPLE:-</u>

From the data given below construct the index number for the year 2007 on the base year 2008 in Rajasthan state.

COMMODITIES	UNITS	PRICE (Rs) 2007	PRICE (Rs) 2008
Sugar	Quintal	2200	3200
Milk	Quintal	18	20
Oil	Litre	68	71
Wheat	Quintal	900	1000
Clothing	Meter	50	60

Solution:-

Index Number for 2008-

$$\sum p_0 = 3236 \qquad \sum p_1 = 4351$$

$$P_{01} = \frac{\sum p_1}{\sum p_0} \times 100 = \frac{4351}{3236} \times 100 = 134.45$$

It means the prize in 2008 were 34.45% higher than the previous year

SIMPLE AVERAGE OF RELATIVES METHOD

- The current year price is expressed as a price relative of the base year price. These price relatives are then averaged to get the index number. The average used could be arithmetic mean, geometric mean or even median.

$$P_{01} = \frac{\sum \left(\frac{p_1}{p_0} \times 100 \right)}{N}$$

Where N is Numbers Of items

Example

From the data given below construct the index number for the year 2008 taking 2007 as by using arithmetic mean.

Commodities	Price (2007)	Price (2008)
P	**6**	**10**
Q	**2**	**2**

R	**4**	**6**
S	**10**	**12**
T	**8**	**12**

Solution-

Index number using arithmetic mean-

Commodities	**Price (2007)**	**Price (2008)**	**Price Relative**
P	6	10	166.7
Q	12	2	16.67
R	4	6	150.0
S	10	12	120.0
T	8	12	150.0

$$\sum\left(\frac{p_1}{p_0}\times 100\right)$$

$$P_{01}=\frac{\sum\left(\frac{p_1}{p_0}\times 100\right)}{N}=\frac{603.37}{5}=120.63$$

Weighted index numbers

- These are those index numbers in which rational weights are assigned to various chains in an explicit fashion.

(A) Weighted aggregative index numbers-

These index numbers are the simple aggregative type with the fundamental difference that weights are assigned to the various items included in the index.

- Dorbish and bowley's method.

- Fisher’s ideal method.
- Marshall-Edgeworth method.
- Laspeyres method.
- Paasche method.
- Kelly’s method.

Laspeyres Method-

This method was devised by Laspeyres in 1871. In this method the weights are determined by quantities in the base.

$$p_{01} = \frac{\sum p_1 q_0}{\sum p_0 q_0} \times 100$$

Paasche’s Method.

This method was devised by a German statistician Paasche in 1874. The weights of current year are used as base year in constructing the Paasche’s Index number

$$p_{01} = \frac{\sum p_1 q_1}{\sum p_0 q_1} \times 100$$

Dorbish & Bowleys Method.

This method is a combination of Laspeyre’s and Paasche’s methods. If we find out the arithmetic average of Laspeyre’s and Paasche’s index we get the index suggested by Dorbish & Bowley.

$$p_{01} = \frac{\dfrac{\sum p_1 q_0}{\sum p_0 q_0} + \dfrac{\sum p_1 q_1}{\sum p_0 q_1}}{2} \times 100$$

Fisher’s Ideal Index.

Fisher’s deal index number is the geometric mean of the Laspeyre’s and Paasche’s index numbers.

Marshall-Edgeworth Method.

In this index the numerator consists of an aggregate of the current years price multiplied by the weights of both the base year as well as the current year.

$$p_{01} = \frac{\sum p_1 q_0 + \sum p_1 q_1}{\sum p_0 q_0 + \sum p_0 q_1} \times 100$$

q Refers to the quantities of the year which is selected as the base.

Kelly’s Method.

Kelly thinks that a ratio of aggregates with selected weights (not necessarily of base year or current year) gives the base index number

$$p_{01} = \frac{\sum p_1 q}{\sum p_0 q} \times 100$$

Example- Given below are the price quantity data,with price quoted in Rs. per kg and production in qtls. Find- (1) Laspeyers Index (2) Paasche's Index (3)Fisher Ideal Index

ITEMS	PRICE (.2002)	PRODUCTION	PRICE (2007)	PRODUCTION
BEEF	15	500	20	600
MUTTON	18	590	23	640
CHICKEN	22	450	24	500

Solution-

ITEMS	(p_0) PRICE	(q_0) PRODUCTION	(p_1) PRICE	(q_1) PRODUCTION	(p_1q_0)	(p_0q_0)	(p_1q_1)	(p_0q_1)
BEEF	15	500	20	600	10000	7500	12000	9000
MUTTON	18	590	23	640	13570	10620	14720	11520
CHICKEN	22	450	24	500	10800	9900	12000	11000
TOTAL					34370	28020	38720	31520

Solution-

1.Laspeyres index

$$p_{01} = \frac{\sum p_1 q_0}{\sum p_0 q_0} \times 100 = \frac{34370}{28020} \times 100 = 122.66$$

3. Paasche's Index

$$p_{01} = \frac{\sum p_1 q_1}{\sum p_0 q_1} \times 100 = \frac{38720}{31520} \times 100 = 122.84$$

Fisher Ideal Index

$$P_{01} = \sqrt{\frac{\sum p_1 q_0}{\sum p_0 q_0} \times \frac{\sum p_1 q_1}{\sum p_0 q_1}} \times 100 \qquad = \sqrt{\frac{34370}{28020} \times \frac{38720}{31520}} \times 100 = 122.69$$

Weighted average of price relative

In weighted Average of relative, the price relatives for the current year are calculated on the basis of the base year price. These price relatives are multiplied by the respective weight of items. These products are added up and divided by the sum of weights.

Weighted arithmetic mean of price relative-

$$P = \frac{P_1}{P_0} \times 100 \qquad P_{01} = \frac{\sum PV}{\sum V}$$

P=Price relative

V=Value weights= $p_0 q_0$

Value index numbers

Value is the product of price and quantity. A simple ratio is equal to the value of the current year divided by the value of base year. If the ratio is multiplied by 100 we get the value index number.

$$V = \frac{\sum p_1 q_1}{\sum p_0 q_0} \times 100$$

Chain index numbers

When this method is used the comparisons are not made with a fixed base, rather the base changes from year to year. For example, for 2007,2006 will be the base; for 2006, 2005 will be the same and so on.

Chain index for current year-

$$= \frac{\text{Average link relative of current year} \times \text{Chain index of previous year}}{100}$$

- Example-
- From the data given below construct an index number by chain base method.

Price of a commodity from 2006 to 2008.

YEAR	PRICE
2006	50
2007	60

2008	65

solution-

YEAR	PRICE	LINK RELATIVE	CHAIN INDEX (BASE 2006)
2006	50	100	100
2007	60	$\frac{60}{50}\times 100 = 120$	$\frac{120\times 100}{100} = 120$
2008	65	$\frac{65}{60}\times 100 = 108$	$\frac{108\times 120}{100} = 129.60$

$$P_{01} = \frac{\Sigma RW}{\Sigma W}$$

where ΣW stands for the sum of weights of different commodities :
and ΣR stands for the sum of price relatives.

Commodity	Weights W	Base Prices Year P_0	Current Year Prices P_1	Price Relatives $R = \frac{P_1}{P_0} \times 100$	RW
A	5	10	20	20/10 × 100 = 200.0	1000.0
B	4	15	25	25/15 × 100 = 166.7	666.8
C	2	40	60	60/40 ×100 = 150.0	300.0
D	3	25	40	40/25 × 100 = 160.0	480.0
Total	ΣW=14			ΣRW = 2446.8	

$$\text{Index Number } (P_{01}) = \frac{\Sigma RW}{\Sigma W}$$

$$P_{01} = \frac{2446.8}{14} = 174.8$$

Important types of index numbers are discussed below:

1. Wholesale Price Index Numbers:

Wholesale price index numbers are constructed on the basis of the wholesale prices of certain important commodities. The commodities included in preparing these index numbers are mainly raw-materials and semi-finished goods. Only the most important and most price-sensitive and semi- finished goods which are bought and sold in the wholesale market are selected and weights are assigned in accordance with their relative importance.

The wholesale price index numbers are generally used to measure changes in the value of money. The main problem with these index numbers is that they include only the wholesale prices of raw materials and semi-finished goods and do not take into consideration the retail prices of goods and services generally consumed by the common man. Hence, the wholesale price index numbers do not reflect true and accurate changes in the value of money.

2. Retail Price Index Numbers:

These index numbers are prepared to measure the changes.in the value of money on the basis of the retail prices of final consumption goods. The main difficulty with this index number is that the retail price for the same goods and for continuous periods is not available. The retail prices represent larger and more frequent fluctuations as compared to the wholesale prices.

3. Cost-of-Living Index Numbers:

These index numbers are constructed with reference to the important goods and services which are consumed by common people. Since the number of these goods and services is very large, only representative items which form the consumption pattern of the people are included. These index numbers are used to measure changes in the cost of living of the general public.

4. Working Class Cost-of-Living Index Numbers:

The working class cost-of-living index numbers aim at measuring changes in the cost of living of workers. These index numbers are consumed on the basis of only those goods and services which are generally consumed by the working class. The prices of these goods and index numbers are of great importance to the workers because their wages are adjusted according to these indices.

5. Wage Index Numbers:

The purpose of these index numbers is to measure time to time changes in money wages. These index numbers, when compared with the working class cost-of-living index numbers, provide information regarding the changes in the real wages of the workers.

6. Industrial Index Numbers:

Industrial index numbers are constructed with an objective of measuring changes in the industrial production. The production data of various industries are included in preparing these index numbers.

Importance of Index Numbers:

Index numbers are used to measure all types of quantitative changes in different fields.

Various advantages of index numbers are given below:

1. General Importance:

In general, index numbers are very useful in a number of ways:

(a) They measure changes in one variable or in a group of variables.

(b) They are useful in making comparisons with respect to different places or different periods of time,

(c) They are helpful in simplifying the complex facts.

(d) They are helpful in forecasting about the future,

(e) They are very useful in academic as well as practical research.

2. Measurement of Value of Money:

Index numbers are used to measure changes in the value of money or the price level from time to time. Changes in the price level generally influence production and employment of the country as well as various sections of the society. The price index numbers also forewarn about the future inflationary tendencies and in this way, enable the government to take appropriate anti- inflationary measures.

3. Changes in Cost of Living:
Index numbers highlight changes in the cost of living in the country. They indicate whether the cost of living of the people is rising or falling. On the basis of this information, the wages of the workers can be adjusted accordingly to save the wage earners from the hardships of inflation.

4. Changes in Production:
Index numbers are also useful in providing information regarding production trends in different sectors of the economy. They help in assessing the actual condition of different industries, i.e., whether production in a particular industry is increasing or decreasing or is constant.

5. Importance in Trade:
Importance in trade with the help of index numbers, knowledge about the trade conditions and trade trends can be obtained. The import and export indices show whether foreign trade of the country is increasing or decreasing and whether the balance of trade is favourable or unfavourable.

6. Formation of Economic Policy:
Index numbers prove very useful to the government in formulating as well as evaluating economic policies. Index numbers measure changes in the economic conditions and, with this information, help the planners to formulate appropriate economic policies. Further, whether particular economic policy is good or bad is also judged by index numbers.

7. Useful in All Fields:
Index numbers are useful in almost all the fields. They are specially important in economic field.

Some of the specific uses of index numbers in the economic field are:
(a) They are useful in analysing markets for specific commodities.
(b) In the share market, the index numbers can provide data about the trends in the share prices,
(c) With the help of index numbers, the Railways can get information about the changes in goods traffic.
(d) The bankers can get information about the changes in deposits by means of index numbers.

Limitations of Index Numbers:

Index number technique itself has certain limitations which have greatly reduced its usefulness:
(i) Because of the various practical difficulties involved in their computation, the index numbers are never cent per cent correct.

(ii) There are no all-purpose index numbers. The index numbers prepared for one purpose cannot be used for another purpose. For example, the cost-of-living index numbers of factory workers cannot be used to measure changes in the value of money of the middle income group.

(iii) Index numbers cannot be reliably used to make international comparisons. Different countries include different items with different qualities and use different base years in constructing index numbers.

(iv) Index numbers measure only average change and indicate only broad trends. They do not provide accurate information.

(v) While preparing index numbers, quality of items is not considered. It may be possible that a general rise in the index is due to an improvement in the quality of a product and not because of a rise in its.

Time series analysis

Definitions, Applications and Techniques

Definition	**Definition of Time Series**: *An ordered sequence of values of a variable at equally spaced time intervals*.
Time series occur frequently when looking at industrial data	**Applications**: The usage of time series models is twofold: Obtain an understanding of the underlying forces and structure that produced the observed data Fit a model and proceed to forecasting, monitoring or even feedback and feed forward control. Time Series Analysis is used for many applications such as: Economic Forecasting Sales Forecasting Budgetary Analysis Stock Market Analysis Yield Projections Process and Quality Control Inventory Studies Workload Projections Utility Studies Census Analysis and many, many more...

There are many methods used to model and forecast time series	**Techniques:** The fitting of time series models can be an ambitious undertaking. There are many methods of model fitting including the following: Box-Jenkins ARIMA models Box-Jenkins Multivariate Models Holt-Winters Exponential Smoothing (single, double, triple) The user's application and preference will decide the selection of the appropriate technique. It is beyond the realm and intention of the authors of this handbook to cover all these methods. The overview presented here will start by looking at some basic smoothing techniques: Averaging Methods Exponential Smoothing Techniques.

What Is a Time Series?

A time series is a sequence of numerical data points in successive order. In investing, a time series tracks the movement of the chosen data points, such as a security's price, over a specified period of time with data points recorded at regular intervals. There is no minimum or maximum amount of time that must be included, allowing the data to be gathered in a way that provides the information being sought by the investor or analyst examining the activity.

[Important: Time series analysis can be useful to see how a given asset, security, or economic variable changes over time.]

Understanding Time Series

A time series can be taken on any variable those changes over time. In investing, it is common to use a time series to track the price of a security over time. This can be tracked over the short term, such as the price of a security on the hour over the course of a business day, or the long term, such as the price of a security at close on the last day of every month over the course of five years.

Time Series Analysis

Time series analysis can be useful to see how a given asset, security, or economic variable changes over time. It can also be used to examine how the changes associated with the chosen data point compare to shifts in other variables over the same time period.

For example, suppose you wanted to analyze a time series of daily closing stock prices for a given stock over a period of one year. You would obtain a list of all the closing prices for the stock from each day for the past year and list them in chronological order. This would be a one-year daily closing price time series for the stock.

Delving a bit deeper, you might be interested to know whether the stock's time series shows any seasonality to determine if it goes through peaks and troughs at regular times each year. Analysis in this area would require taking the observed prices and correlating them to a chosen season. This can include traditional calendar seasons, such as summer and winter, or retail seasons, such as holiday seasons.

Alternatively, you can record a stock's share price changes as it relates to an economic variable, such as the unemployment rate. By correlating the data points with information relating to the selected economic variable, you can observe patterns in situations exhibiting dependency between the data points and the chosen variable.

Time Series Forecasting

Time series forecasting uses information regarding historical values and associated patterns to predict future activity. Most often, this relates to trend analysis, cyclical fluctuation analysis, and issues of seasonality. As with all forecasting methods, success is not guaranteed.