

### OBJECTIVE

To enable professional undergraduate students to understand the importance of mathematics in computer science.

### QUESTIONS

- 1) Discuss mean, median and mode, partition values –quartiles, deciles and percentiles with an Example.
- 2) Discuss Karl Person's Methods; Spearman's rank correlation. Give example.
- 3) Explain duality; concept, significance, usage & application in business decision making.
- 4) Discuss of solution methods of assignment problem, maximization in an assignment,

### PROCEDURE:

For completing the assignment students should refer to the books mentioned in syllabus and they can take help from internet. The assignment should be handwritten and properly filled. Students should make assignment in the following manner:

1. Cover Page
2. Objectives
3. Index
4. Content
5. Conclusion
6. References
7. Softcopy and Hardcopy
8. Give proper headings and subheadings
9. Explain every topic in points and using diagrams.
10. Put Examples

### OUTCOME:

After doing this assignment, students will come to understand the importance of mathematics in computer science.

### REFERENCE BOOKS:

#### TEXT BOOKS:

- [T1] Sharma, J.K.; Operations Research: Problems & Solutions; Macmillan India  
[T2] Gupta, S.P. and Gupta, P.K.; Quantitative Techniques and Operations Research, Sultan Chand & Sons  
[T3] Vohra, N.D.; Quantitative Techniques in Management 2003.  
[T4] Gupta, S.P. Statistical Methods, Sultan Chand & Sons. 2004  
[T5] A. M. Natarajan, P Balasubramani A. Tamilarasi, Operations Research, Pearson 2005

#### REFERENCE BOOKS:

- [R1] R.L.Rardin, Optimization in Operations Research, Prentice Hall.  
[R2] A.Racindran, D.T.Phillips, J.S.Solberg, Second edition, John Wiley.

**OBJECTIVE:**

Students will be able to understand the basic components of the Computer. Student would be able to explain the functioning of Computer. Student should be able to understand the various components and function of computer. Student would be able to understand the application and uses of Computer in the various fields. Student will understand the role of Computer. Student will be able to understand the concepts of Computer, its functioning and usage of Computer in various fields.

**QUESTIONS:**

1. Draw a block diagram of CAM. Explain its functioning.
2. A digital computer has a common bus system for 8 registers and 8 bits each. The bus is Constructed with MUXs:
  - i) How many MUX are there in the bus?
  - ii) What size of MUXs is needed?
  - iii) How many selection inputs are there in each MUX?
3. Explain the three addresses, two addresses, one address and zero address instruction with example.
4. Explain the difference between direct and indirect address instructions with diagram?
5. Explain arithmetic pipeline instruction with example.
6. Explain DMA controller with the help of block diagram.

**Procedure: -**

Assignment should be handwritten.  
Give proper headings and subheadings.  
Use examples.

**Students should make assignment in the following manner:**

Cover page  
Objective  
Index  
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Conclusion  
References

**Aim:** To understand Object Oriented and Object based programming paradigm in event based programming environment.

**Objectives**

- To get the Knowledge about different Object Oriented Features and tiers in Vb.Net.
- To understand disconnected architecture of .Net and connectivity with database.

**Attempt the following Questions:**

Q1 Explain all the tiers in Vb.Net with detailed description?

Q2. Short notes on:

a) ADO vs. ADO.Net b) ADO.Net data namespaces c) ADO.Net Object Model

Q3. What are the Similarities and Differences between Vb.Net and Visual Basic?

Q4. What are Arrays? Explain types of arrays and also explain it with example.

Q5. What are the Common Controls in Vb. Net? Explain any five with example.

Q6. Short notes on:

a) Garbage Collector b) Code Access Security

**Procedure: -**

Assignment should be Handwritten.

Give proper headings and subheadings.

Use examples.

Students should make assignment in the following manner:

- Cover page
- Objectives
- Index
- Content
- Conclusion
- References

**Outcome:**

After doing the assignment, students understand the various basic concept of the Front End Design Tool VB.Net)

**Reference Books:**

- 1) Visual Basic 2010 programming Black Book, by Kogent Learning Solutions, Wiley India
- 2) Visual Basic 2010 Step By Step, Michael Halvorson, PHI
- 3) Mastering Microsoft Visual Basic 2010, Evangelos Petroustos, Wiley Publications
- 4) Beginning Visual Basic 2010 (Wrox)

**QUESTIONS**

1. Explain in Detail the Double Entry System of Book Keeping
2. What is Trial Balance? Explain its Objectives.
3. Write Short Note

1. Trading A/C.
2. P & L A/C

4. Journalise the following transactions:

2006

Jan. 1	Girdhari Commenced business with cash	7,500
Jan. 3	Goods purchased for cash	1,000
Jan. 4	Bought of Hari	250
Jan. 8	Furniture purchased from Murari for cash	50
Jan. 9	Furniture purchased from Murari	250
Jan. 12	Cash Paid to Hari in full Settlement of his account	240
Jan. 15	Goods Purchased from Anil and he allowed us 10% trade discount	350
Jan. 20	Cash paid to anil in full satisfaction	300
Jan. 21	Prince Behari bought from us	115
Jan. 22	Cash paid by Prince Behari	15
Jan. 25	Prince Behari became insolvent a final composition of 50 P in the rupee received from his official receiver out of debit of Rs. 100	50
Jan. 26	Paid for Miscellaneous Expenses	25
Jan. 28	Withdrawn by Girdhari for his personal use	100

5. From the following particulars, write out a Cash Book, with Cash, Bank and Discount columns of M/s Ramji & Co., Kolkata for the month of January, 2005 and balance the Cash Book.

Jan. 1	Balance of cash in hand rs. 2,000 and overdraft with State Bank of India Rs.10,000
Jan. 5	Received cash from Chetty & Co. Rs. 2,000 and allowed him discount Rs. 60.
Jan. 7	Paid into bank Rs. 3,500.
Jan. 15	Paid to Govind by cheque Rs. 520 in full settlement of his account for Rs. 550
Jan. 20	Received for cash sales; Cash Rs. 175 and Cheque Rs. 100.
Jan. 22	Paid Ram &Co. by cheque Rs. 1200 Discount allowed Rs. 45.
Jan. 25	Paid by Cheque to Shanti Kumar Stores, for private use of the proprietor Rs. 525.



तेजस्वि नावधीतमस्तु  
ISO 9001:2008 & 14001:2004

# FAIRFIELD

Institute of Management & Technology

Managed by 'The Fairfield Foundation'

( Affiliated to GGSIP University, New Delhi )

Jan. 28 Drew for office use Rs. 500  
Jan. 31 Harish paid Directly into our Bank Account Rs. 600.

### Objectives:

The main objective of the assignment is to help students solve a problem using object oriented approach.

- Q1. Justify how Object Oriented Programming models the real world entities better than the Procedure Oriented Programming.
- Q2. Explain what you understood by features of OOP. Explain each feature with an example.
- Q3. Explain Function Overloading. Is it an example of Polymorphism? If yes, explain how?
- Q4. What is a constructor? Write a program to demonstrate the use of constructors.
- Q5. Differentiate between function overloading and overriding.

### Procedure:

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### Outcome:

The switch from Procedural programming to object oriented approach requires understanding the situations from real world. The assignment will help the students compare both the approaches and implement the same using the language C++

### References:

Object Oriented Programming With C++, [Balagurusamy](#), Tata McGraw-Hill Education, 2008