

2016

Time : 3 hours

Full Marks : 80

The questions are of equal value.

*Answer **all** questions.*

**(COMPUTER ORIENTED
ACCOUNTING SYSTEM)**

1. What is Financial Management and Capital Budgeting ? Explain the purpose and their function in an organisation.

OR

Define the term accounting. Explain the scope and principles of accounting.

2. Explain the following terms :
 - (a) Trial Balance and Final Accounts
 - (b) Accounting equation and Cash book

OR

- (c) Explain the basics of capital budgeting and its benefits.
 - (d) What is the practical system of book keeping for subsidiary book ? Write the features of banking transaction and bank reconciliation statements.
3. (a) What are term loans ? Explain their features.
- (b) What is long term financing ? Explain the requirements and it's benefit.

OR

What is Inventory Management ? Explain the different inventory control technique.

4. The plant and machinery purchased on 1st April, 2007 for Rs. 1,80,000. Rate of depreciation was to be charged fixed at 8% p.a. as per straight line method. The machinery was sold for Rs. 85,000 on 31st December, 2012. Prepare Machinery Account assuming the year ending on 31st March every year.

OR

Journalise the following transactions in the books of Mr. Gupta for the month of April, 2012 :

- (a) Mr. Gupta started business with Cash of Rs. 18,000, Machinery Rs. 10,000 and Furniture Rs. 3,500.
- (b) Purchased goods from Mr. Sanghavi of Rs. 9,000 at 10% Trade Discount.
- (c) Deposited with Bank of Baroda Rs. 2,800.
- (d) Sold goods to Mr. Khanna Rs. 8,000 at 5% Trade Discount.
- (e) Sold goods to Mr. Anand Rs. 3,000 at 5% Discount and 2% Cash Discount.
- (f) Purchased furniture of Rs. 2,500 for cash and spent Rs. 200 for transport of furniture.
- (g) Paid Electricity Charges for office Rs. 300.
- (h) Withdraw Rs. 200 for personal use.



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1. Consider the following linear programming model and solve it using two-phase method.

$$\text{Min. } Z = 12x_1 + 18x_2 + 15x_3$$

Subject to :

$$4x_1 + 8x_2 + 6x_3 \geq 64$$

$$3x_1 + 6x_2 + 12x_3 \geq 96$$

$$x_1, x_2 \text{ and } x_3 \geq 0$$

OR

Define the following :

- (a) Unbounded solution

- (b) Slack variable
- (c) Degenerate solution
- (d) Basic variable
- (e) Key Row

2.2) Consider the following transportation problem and solve it by using Vogel's Approximation Method (VAM) and also calculate transportation cost :

		Destination				
		1	2	3	4	
Source	1	3	1	7	4	Supply
	2	2	6	5	9	300
	3	8	3	3	2	200
	4	6	4	2	3	400
						300
Demand		250	350	400	200	1200

OR

What are the types of transportation problem ?
Explain them with suitable example.

3. Consider the payoff matrix of Player A shown below and solve its optimality using graphical method.

There action for as late go player

		Player B	
		1	2
Player A	1	1	3
	2	3	1
	3	5	-1
	4	6	-6

OR

✓ Discuss Game with pure strategies with the help of an example.

4. Explain the Programme Evaluation and Review Technique (PERT) with suitable example.

OR

Define the following :

- (a) Total Float
- (b) Free Float
- (c) Backward Pass
- (d) Forward Pass
- (e) Critical Path



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**(DATA COMMUNICATION AND
COMPUTER NETWORK)**

1. (a) Define Computer Network. Explain the use of network.
- (b) What is Network Topology ? Explain the different types of topology giving advantages and disadvantages.

OR

- (c) Differentiate between connection less and connection oriented communication network.
- (d) Classify the different communication protocol.

2. What is ISO-OSI reference model ? Describe the layer of the model and its function.

OR

Write short notes on the following :

- (a) HDLC
 - (b) LAN topologies and protocols
 - (c) IEEE 802.3
 - (d) Switching and Routing
3. What are IEEE LAN standards ? Explain the IEEE 802.3 and 802.4 standards.

OR

Explain TCP/IP in details, giving an example of TCP/IP model. What are the route discovery protocols. Give and explain any two examples of route discovery protocols.

4. Write short notes on the following :
- (a) Major IP services
 - (b) IP address structure

OR

- (c) CSMA/CD
- (d) Broad band and base band LAN



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(SOFTWARE ENGINEERING)

1. Explain the prototype and spiral model with the help of a neat diagram.

OR

What is Software Engineering ? Describe the different stages of the waterfall model.

2. Write short notes on the following :
 - (a) Project Scheduling
 - (b) Software configuration management

OR

- (a) Explain the COCOMO for software cost estimation.

- (b) Discuss the technique for estimating project duration and determining the staffing pattern.
- 3. (a) What is Coupling and Cohesion ?
- (b) What is meant by cardinality and modality ?
Explain briefly.

OR

- (c) Differentiate between function oriented and object oriented design.
- (d) List the principles of a software design ?
What is the benefit of modular design.
- 4. (a) Discuss the difference between black box testing and structural testing and suggests how they can be used together in the defect testing process.

OR

- (b) What is Testing ? Describe the different types of integration and system testing.

