FACULTY OF INFORMATICS

M.C.A. (3 Years Course) II - Semester (CBCS) (Backlog) (Old) Examination,
October/ November 2023

Subject: Accounting and Financial Management

Time: 3 Hours **Max. Marks: 70**

Note: I. Answer one question from each unit. All questions carry equal marks.
II. Missing data, if any, may be suitably assumed.

Unit – I

1. a) From the following balances of Mr. X, prepare the Trading and Profit and Loss account for the year ended 31st March,2000.

Particulars	**Amount (Rs.)**
Stock at commencement	20,000
Salaries	25,000
Sundry expenses	2,000
Rent and Taxes	3,000
Purchases	90,000
Freight Inward	2,500
Advertising	1,500
Sales	1,85,000
Discount allowed	1,800
Discount Received	1,000

b) What do you mean by Journal proper?

(OR)

2. Examine the concepts and conventions of accountancy along with examples.

Unit – II

3. List out the various types of ratios along with formulas.

(OR)

4. Alpha Manufacturing Co. has drawn up the following Profit and Loss Account for the year ended 31st March, 2012.

Particulars	**Amount (Rs.)**	**Particulars**	**Amount (Rs.)**
Opening Stock	26,000	Sales	1,00,000
Purchases	80,000	Closing Stock	98,000
Manufacturing Exp.	16,000		
Wages	24,000		
Gross profit c/d	52,000		
	1,98,000		**1,98,000**
To Selling and Distribution Exp.	4,000	By Gross Profit	52,000
To Administrative Exp.	22,800	Commission Received	4,800
To General Exp.	1,200	Income from Investments	6,000
To Value of furniture lost by Fire	800		
To Net Profit	34,000		
	62,800		**62,800**

You are required to find out: (A) Gross Profit Ratio (B) Net Profit Ratio (C) Operating Ratio

Unit – III

5. What is an inventory? How does can it be managed in an organization?

(OR)

6.

Liabilities	**1-1-05**	**31-12-05**	**Assets**	**1-1-05**	**31-12-05**
Creditors	36,000	41,000	Cash	4,000	3,600
Loan from Partner	---	20,000	Debtor	35,000	38,400
Loan from Bank	30,000	25,000	Stock	25,000	22,000
Capital	1,48,000	1,49,000	Land	20,000	30,000
			Building	50,000	55,000
			Machinery	80,000	86,000
	2,14,000	**2,35,000**		**2,14,000**	**2,35,000**

During the year Rs. 26,000 paid as dividend. The provision made for depreciation against machinery as on 1.1.05 was Rs. 27,000 and on 31.12.05 Rs 36,000. Prepare a cash flow statement.

Unit – IV

7. What are the various types of cost of capital? Explain.

(OR)

8. There are two projects A & B. The cost of the project is Rs.30,000 in each case. The cash inflows are as follows:

YEAR	**CFAT OF PROJECT A(RS)**	**CFAT OF PROJECT B(RS)**
1	10,000	2,000
2	10,000	4,000
3	10,000	24,000

Calculate Payback, NPV and Profitability Index, suggest which project to be accepted under each method.

Unit – V

9 . Calculate P/v ratio, Break-even point and Margin of safety from the following details.

Sales Rs.4,00,000
Fixed cost Rs.1,00,000
Variable cost Rs.2,90,000

(OR)

10. What do you mean by Budgeting? Explain the significance of various kinds of budgeting.

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Code No. E-12183/CBCS

FACULTY OF INFORMATICS

M.C.A. (2 Years Course) II Semester (CBCS) (Main & Backlog) Examination, October/ November 2023

Subject: Operations Research

Time: 3 Hours **Max. Marks: 70**

Note: I. Answer one question from each unit. All questions carry equal marks.
II. Missing data, if any, may be suitably assumed.

Unit – I

1. By using Simplex method, Maximize $Z=8X_1+6X_2$
   Subject to constraints $4X_1+2X_2 \leq 60$
   $2X_1+4X_2 \leq 48$
   And $X_1 \geq 0$ and $X_2 \geq 0$

(OR)

2. Solve the following LP problem using Graphical method
   Maximize $Z= 30x_1 + 40x_2$
   Subject to the constraints,
   $4x_1 + 2x_2 \leq 16$
   $2x_1 - x_2 \geq 2$
   $x_2 \leq 2$
   $x1, x2 \geq 0$

Unit - II

3. Define Transportation problem. Examine the special cases in Transportation problem and explain each with examples.

(OR)

4. Obtain an optimal solution by using MODI method in the following Transportation problem, given per unit cost of Transportation

Godown

Factory	D1	D2	D3	D4	Supply
S1	19	30	50	10	7
S2	70	30	40	60	9
S3	40	8	70	20	18
Demand	5	8	7	14	34

Unit - III

5. Solve the following Assignment problem in order to minimize Total cost. The cost matrix given below gives the assignment cost when different operators are assigned to various machines.

OPERATORS

MACHINES	I	II	III	IV	V
A	30	25	33	35	36
B	23	29	38	23	26
C	30	27	22	22	22
D	25	31	29	27	32
E	27	29	30	24	32

(OR)

6. a) What is Integer planning. State its formulations and Applications.
   b) Write about the branch and bound technique for assignment problem.

Unit - IV

7. What are the various application areas of dynamic programming?

(OR)

8. Use dynamic programming to solve the following LPP
   Maximize (y_1, y_2, y_3)
   Subject to $y_1 + y_2 + y_3 = 5$
   $y_1, y_2, y_3 \geq 0$

Unit - V

9. a) Write the assumptions made in game theory. State the characteristics of Game theory.
   b) Reduce the following game by dominance and find the value of game

	Player B		
Player A	I	II	III
I	10	5	-2
II	13	12	15
III	16	14	10

(OR)

10. a) Explain basic terminology, assumptions and limitations of game theory.
    b) Write a note on applications of Game theory.

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