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DCAF102

Reg. No.

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I Semester B.Com.(A&F) Degree Examination, February/March - 2024

COMMERCE

Quantitative Aptitude for Business Decisions

(CBCS NEP Scheme)

Time : 2½ Hours

Maximum Marks :60

Instructions to Candidates:

Answers should be written in English only.

SECTION - A

Answer any FIVE of the following questions. Each question carries 2 marks. (5×2=10)

1. a) Find HCF and LCM of 28,42 and 98.
- b) What are even numbers?
- c) Find the 10th term of sequence 3,5,7,9...
- d) Give the general form of quadratic equation.
- e) If $A = \begin{bmatrix} 4 & 3 \\ 2 & 1 \end{bmatrix}$, $B = \begin{bmatrix} 1 & 2 \\ 3 & 4 \end{bmatrix}$ Find $A - B = B - A$.
- f) What is ratio?
- g) Find the fourth proportional to 6: 8: 9.



SECTION - B

Answer any FOUR of the following questions. Each question carries 5 marks.

(4×5=20)

2. Solve for $x: 3(x+5) - 25 = 9 + 2(x-7)$
3. If 3rd term of GP is 12 and 6th term is 96, find 9th term.
4. If $A = \begin{bmatrix} 4 & 2 \\ 6 & 4 \end{bmatrix}$ and $B = \begin{bmatrix} 8 & 4 \\ 6 & 2 \end{bmatrix}$ show that $(A - B)' \neq B'A'$.

[P.T.O.]



5. Solve by elimination method.

$$3x + 2y = 18$$

$$3x + 4y = 24$$

6. Find the Compound Interest on Rs. 5,000 for 5 years charging halfyearly interest @ 6%p.a.

SECTION - C

Answer any TWO of the following questions. Each question carries 12 marks.

(2×12=24)

7. a) Solve for x using formula method $x^2 - 3x - 10 = 0$. (6)

b) How many terms of series 5,4,3 must be taken so that sum may be - 90. (6)

8. a) Find the difference between CI and SI on Rs. 80,000 for 3 years at 10% p.a. (6)

b) Solve by Cramer's rule $5x - 3y = 24$. $-7x + 11y = 14$. (6)

9. a) Evaluate $|A| = \begin{vmatrix} 23 & 6 & 11 \\ 36 & 5 & 26 \\ 63 & 13 & 37 \end{vmatrix}$ (6)

b) Find Banker's Discount, Banker's Gain and True Discount on a bill of Rs. 10,500 due for 9 months at 9% p.a. (6)

SECTION - D

Answer any ONE of the following questions. Each question carries 6 marks. (1×6=6)

10. List out any 6 types of matrices with examples.

11. A company is considering three methods of production which are used in producing three products, A,B and C. The amount of each product produced by each method is shown below.

	Product A	Product B	Product C
Method 1	4	8	2
Method 2	5	7	1
Method 3	3	3	9

Further information relating to profit per unit is as under:

Product	Profit per unit (Rs.)
A	10
B	4
C	6

Using Matrix multiplication find which method maximises total profit.