



DCAF102

Reg. No.

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I Semester B.Com. (A&F) Degree Examination, January/February - 2025
COMMERCE

Quantitative Aptitude for Business Decisions
(CBCS NEP Scheme, Repeaters 2021-2022 Onwards)

Time : 2½ Hours

Maximum Marks : 60

Instructions to Candidates:

All answers should be written in English only.



SECTION - A

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

- What are Rational numbers?
 - Find LCM of 18, 27 and 36.
 - Find the third proportion of 4 and 8.
 - Find compound interest on Rs. 2500 for 3 years at 10% per annum.
 - Find the 8th term of the GP 5, 15, 45,
 - If $A = \begin{bmatrix} 2 & 4 \\ -2 & 6 \end{bmatrix}$ and $B = \begin{bmatrix} 2 & 7 \\ 4 & 5 \end{bmatrix}$ find $A' + B'$.
 - Solve for x : $x^2 - 3x - 10 = 0$.

SECTION - B

Answer any FOUR of the following questions. Each question carries 5 marks. (4×5=20)

- Solve by elimination method.
$$4x - 3y = 8$$
$$3x - 4y = -1$$
- Find the greatest integer which divides 39, 48 and 90 leaving 6, 4 and 2 as remainder.
- Rohit's age after 15 years will be 5 times his age as 5 years ago. What is his present age?

- If $A = \begin{bmatrix} 1 & 4 & 5 \\ -1 & 2 & 3 \\ 6 & -7 & 8 \end{bmatrix}$ and $B = \begin{bmatrix} 3 & -2 & 11 \\ 5 & -6 & 2 \\ 2 & 1 & 3 \end{bmatrix}$ find $2A' + B'$.

- A man saved Rs. 16,500 in 10 years. In each year after the first he saved Rs. 100 more than he did in previous years. How much did he save in first year?

[P.T.O.]



(2)
SECTION - C

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

(2×12=24)

7. a) The sum of 3 terms in AP is 15 and their product is 80. Find the terms.
b) At what rate percent, compound interest will Rs. 7000 amount to Rs. 7571.20 in 2 years?

8. a) Solve using Cramer's Rule.

$$5x + y = 4$$

$$7x - 2y = 9$$

- b) Solve using formula method: $x + \frac{1}{x} = \frac{29}{10}$.

9. a) Find Inverse of $A = \begin{bmatrix} 1 & 3 & 2 \\ 0 & 2 & 1 \\ 0 & 5 & 3 \end{bmatrix}$.

- b) A bill for Rs. 12,000 drawn on 27th May 2022 for 6 months was discounted on 19th July 2022 @ 4%. Find

i) Banker's Discount.

ii) True Discount.

iii) How much does the holder of the bill receive if the banker's gain is Rs. 2?

SECTION - D

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

10. 30 kgs of Commodity A and 26 kgs of Commodity B together cost Rs. 7100 and 25 kgs of commodity A and 13 kgs of commodity B together cost Rs. 5050. Find the cost price of each per kg.

11. Two firms X and Y each manufacture 2 instruments P and Q. The daily production of instruments is as follows.

Firm X: 2 units of P, 4 units of Q

Firm Y: 1 unit of P, 3 units of Q.

Firm 'X' works for 5 days in a week and Firm 'Y' works for 6 days in a week.

Calculate the weekly production volume.
