



III Semester B.B.A. Degree Examination, January - 2026

(SEP 2024 Scheme)

BUSINESS ADMINISTRATION

Business Mathematics

Time : 3 Hours

Maximum Marks : 80

Instructions :

Answers should be written in English only.

SECTION - A

Answers any Five of the following questions. Each question carries 2 marks.

(5×2=10)

1. a) Define business mathematics.
- b) Give the meaning of prime number. Give an example.
- c) Give the meaning of equation.
- d) Give the meaning of zero matrix.
- e) Find the 12th term of AP 4, 7, 10, ---.
- f) Write the meaning of interest.
- g) Differentiate between percentage and percentile.



SECTION - B

Answer any Three of the following questions. Each question carries 6 marks.

(3×6=18)

2. Find the LCM and HCF of 15, 20, 40, 75.
3. Solve $X + Y = 15$ and $3X - Y = 21$.
4. If $A = \begin{bmatrix} 1 & 2 \\ 2 & 4 \end{bmatrix}$ and $B = \begin{bmatrix} 3 & 4 \\ 1 & 2 \end{bmatrix}$ Find $3A + 2B$.
5. If the 11th term of an AP is 44 and 16th term is 19. Find the 20th term and of the AP.
6. Find simple interest on Rs. 2,500 at 5% p.a. for 3 years.

[P.T.O.]

**SECTION - C**

Answer any Three of the following questions. Each question carries 14 marks.
(3×14=42)

7. a) Solve $2x^2 - 7x + 3 = 0$ by factorisation method.
b) Solve $\frac{x+1}{2} - \frac{x-2}{3} = \frac{x+4}{5} + \frac{7}{15}$.
8. Solve using Cramer's rules.
$$x + y + z = 11$$
$$2x - 6y - z = 0$$
$$3x + 4y + 2z = 0$$
9. a) Find the Sum of 40 elements of AP 2, 4, 6, 8, 10, ---.
b) If the 5th term of GP is 81 and 2nd term is 24. Find C.R and 1st term.
10. a) If simple interest on a certain sum is Rs. 300 for 3 years at 8% p.a. Find the sum.
b) Find compound interest on Rs. 25,000 at 5% p.a for 3 years.
11. a) Solve by formula method $6x^2 + 5x - 4 = 0$.
b) Find the Difference between CI and SI on Rs. 6,000 for 5 years at 10%.

SECTION - D

Answer any one of the following. This question carries 10 marks. (1×10=10)

12. a) A man sells 7 horses and 8 cows at Rs. 29,400 and 5 horses and 6 cows at Rs. 21,500. What is the selling price of each?

(OR)

- b) At Bangalore two merchants have following stock of food grains (in bags).

	Rice	Wheat	Ragi
Merchant A	300	600	800
Merchant B	250	700	1000

The price (in Rs.) at three cities

	Rice	Wheat	Ragi
Mysore	100	90	80
Mangalore	110	80	70
Bangalore	120	70	80

To which city each merchant will send his supply in order to get maximum gross receipts. Solve by matrix multiplication method.

