

**Second Semester FYUGP Degree (Reg) Examination April
2026**

KU2DSCBBA104 - BUSINESS MATHEMATICS

2025 Admission onwards

Time : 1.5 hours

Maximum Marks : 50

Section A

Answer any 6 questions. Each carry 2 marks.

1. Construct a 2x2 matrix whose elements are given by $a_{ij} = (i + j)^2$
2. What is matrix?
3. Find Arithmetic Mean between a and b.
4. How to calculate the sum of n terms of an AP?
5. Calculate the simple interest on 18,000 for 4 years at 5% per annum.
6. What is appreciation?
7. Solve $8x + 17(x-3) = 4(4x-9) + 12$
8. What is the formula for calculating a quadratic equation?

Section B

Answer any 4 questions. Each carry 6 marks.

9. A sum of Rs 6,500 is invested for 3 years at 6% compound interest per annum. Find the total amount after 3 years.
10. A sum of Rs 25,000 is invested at 8% per annum for 3 years. Find the compound interest when compounded half-yearly.
11. A box contains red and blue balls in the ratio 5:2. If there are 35 red balls, find the number of blue balls.
12. Solve the equations $8x + 7y = 10$, $11x + 10(1 - y)$
13. Solve $x^2 = x + 30$
14. Solve $(x + 1)(x + 2) - 3 = 0$

Section C

Answer any 1 questions. Each carry 14 marks.

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15. If

$$A = \begin{bmatrix} 1 & 0 & 1 \\ 0 & 1 & 2 \\ 0 & 0 & 4 \end{bmatrix}$$

then show that $|3A| = 27|A|$

16. A) Find the first term of the GP whose 8 th term is 243 and 5 th term is 9 .
B) Find the first term of the AP whose 53 rd term is -58.5 and 3 rd term is 66.5.