K25U 3015

Reg. No. : .....

Name : .....

III Semester B.B.A./B.B.A.(RTM)/B.B.A.-A.A.M./B.B.A.-H.A. Degree (CBCSS – OBE – Supplementary/Improvement) Examination, November 2025
(2019 to 2023 Admissions)
GENERAL AWARENESS COURSE
3 A11 BBA/BBA (RTM)/BBA-AAM/BBA-HA : Numerical Skills

Time : 3 Hours Max. Marks : 40

PART – A

I. Answer **all** questions. **Each** question carries **1** mark.

1) Define rank of a matrix.
2) How many prime numbers are there between 1 and 100 ?
3) What is the value of the discriminant of the quadratic equation $3x^2 + 3x + 11$?
4) Find the 10^{th} term of the arithmetic progression 4, 7, 10, 13, ...
5) Find D in the proportion $\frac{20}{D} = \frac{35}{21}$.
6) What is the distance between the point (5, 7) and the x-axis ? **(6×1=6)**

PART – B

II. Answer **any 6** questions. **Each** question carries **2** marks.

7) Solve $\left(4\sqrt{2}+5\sqrt{3}\right)\left(4\sqrt{2}-5\sqrt{3}\right)$.
8) Find the final amount on a sum of ₹ 1500 compounded annually at 5% for two years.
9) Solve $x^2 - 10x + 21 = 0$.
10) 40 students visited a restaurant. If 25 of them ordered snacks and 35 of them ordered beverages, how many ordered both snacks and beverages ?

P.T.O.

11) Find the area of the triangle formed by the points A(2, 5), B(9, 6), C(12, 8).

12) Two numbers are in the ratio 3 : 4. If their product is 300, find the numbers.

13) Write down the equation for the sum of first N terms of a geometric progression.

14) If A = {3, 4, 6, 8} and B = {5, 8, 10, 12, 7}, find (A – B) ∪ (B – A). **(6×2=12)**

PART – C

III. Answer **any 4** questions. **Each** question carries **3** marks.

15) Find the sum of the first 10 terms of the geometric series 3, 9, 27, 81, ...

16) If $A = \begin{bmatrix} 4 & 3 & 5 \\ 3 & 1 & 7 \end{bmatrix}$ and $B = \begin{bmatrix} 7 & 1 \\ 2 & 2 \\ 1 & 5 \end{bmatrix}$, find AB.

17) The sum of two numbers is 50 and their difference is 12. Find the numbers.

18) Find the present value of ₹ 5,000 due in 2 years at 7% per annum compounded annually.

19) A man performs $\frac{1}{3}$ of his journey by bus, $\frac{1}{4}$ by car and the remaining 30 km by train. Find the total distance travelled.

20) Find the distance between the two points A(12.5) and B(15.9). **(4×3=12)**

PART – D

IV. Answer **any 2** questions. **Each** carries **5** marks.

21) Find the inverse of the matrix $\begin{bmatrix} 4 & 10 & 2 \\ 5 & 8 & 6 \\ 2 & 3 & 4 \end{bmatrix}$.

22) Using the quadratic formula, find the roots of the equation $x^2 - 9x + 20 = 0$.

23) In an A.P. of 50 terms the sum of the first 10 terms is 220 and the sum of the last 20 terms is 3240. Find the arithmetic progression.

24) A man deposits a sum of ₹ 3,000 for 5 years for an interest of 10% per annum compounded annually. How much extra money would he make had he compounded the same sum half yearly for the same period of time and for the same rate of interest ? **(2×5=10)**