K18U 1947

Reg. No. : .....

Name : .....

III Semester B.B.A./B.B.A. (T.T.M.)/B.B.A. (R.T.M.)/B.B.M. Degree (CBCSS-Reg./Sup./Imp.) Examination, November 2018
(2014 Admn. Onwards)
General Course
3A12 BBA/BBA (TTM)/BBA (RTM)/3A11 BBM : NUMERICAL SKILLS

Time : 3 Hours Max. Marks : 40

SECTION – A

Answer the **four** questions. **Each** question carries ½ mark.

1. If two sets have no common elements, then they are called
2. A matrix in which every element is zero, is called
3. The general form of quadratic equation is
4. If a, b, c are in G.P., then 'b' is said to be the _____ between 'a' and 'c'. **(4×½=2)**

SECTION – B

Answer **any four** questions. **Each** question carries **1** mark.

5. Write the Formula for compound interest.
6. Solve $x^2 - 5x + 6 = 0$ by factorization method.
7. What is a set ?
8. If $A = \begin{bmatrix} 2 & 3 \\ 1 & 2 \end{bmatrix}$ and $B = \begin{bmatrix} 4 & 2 \\ 1 & 3 \end{bmatrix}$ then find 6A – 3B.
9. Define Venn diagram.
10. Three numbers in ascending order are in G.P. such that their product is 512. Find the middle number. **(4×1=4)**

P.T.O.

SECTION – C

Answer **any six** questions. **Each** question carries **3** marks.

11. If U = {1, 2, 3, 4, 5, 6, 7, 8}, A = {1, 2, 3}, B = {2, 4, 5}, verify that :

    a) $(A \cup B)' = A' \cap B'$

    b) $(A \cap B)' = A' \cup B'$.

12. If $A = \begin{bmatrix} 2 & 3 & 1 \\ 0 & -1 & 5 \end{bmatrix}$ and $B = \begin{bmatrix} 1 & 2 & -1 \\ 0 & -1 & 3 \end{bmatrix}$.

    Find the matrix X such that $2A - B + X = 0$.

13. Find two natural numbers whose sum is 18 and whose product is 72.

14. Suppose that the 6^{th} and 17^{th} terms of an A.P. are 19 and 41 respectively.

    i) Find the first term and the common difference.

    ii) Find the 40^{th} term.

15. Find the sum of the G.P.

    $1 + 3 + 9 + 27 + \ldots$ to 10 terms.

16. Find the value of 'x' such that PQ = QR, where P, Q, R are (6, –1), (1, 3) and (x, 8) respectively.

17. Solve $(x + 1)(x + 2) - 3 = 0$.

18. Find the number of years an amount of Rs. 8,000 will take to become Rs. 12,000 at 6% p.a. simple interest. **(6×3=18)**

SECTION – D

Answer **any two** questions. **Each** question carries **8** marks.

19. A man sells 7 horses and 8 cows at Rs. 2,940/- and 5 horses and 6 cows at Rs. 2,150/-. What is selling price of each ?

20. If $A = \begin{bmatrix} 3 & 5 & 7 \\ 2 & -3 & 1 \\ 1 & 1 & 2 \end{bmatrix}$ then find A^{-1}.

21. A survey shows that 80% of Indians like apples, where as 53% like oranges. What percentage of Indians like both apples and oranges ? **(2×8=16)**