

22U147

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Name:

Reg. No:

FIRST SEMESTER B.Com. PROFESSIONAL DEGREE EXAMINATION, NOV. 2022

(CUCBCSS-UG)

(Regular/Supplementary/Improvement)

CC17U BCP1 B03 – NUMERICAL SKILLS

(Core Course)

(2017 Admission onwards)

Time: Three Hours

Maximum: 80 Marks

PART-A

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

1. The roots of the equation $7x^2 - 2 = 0$ is
 - a) Rational
 - b) Imaginary
 - c) Irrational
 - d) Integers
2. Find x if the number x, 7, 28 forms a G.P
 - a) 4
 - b) 0
 - c) 7/4
 - d) 4/7
3. If the rows and columns of a determinant are interchanged then the determinant value
 - a) Remains the same
 - b) The sign of the value is changed
 - c) Becomes Zero
 - d) None of these
4. A matrix with equal number of rows and columns are called
 - a) Column matrix
 - b) Row matrix
 - c) Diagonal matrix
 - d) Square matrix
5. Statistics does not study
 - a) Individuals
 - b) Groups
 - c) Aggregates
 - d) All of the above

Fill in the blanks:

6. Height is a variable
7. Line diagrams are dimensional diagram
8. A simple linear equation can be expressed as
9. Ogives are useful to locate
10. Geometric mean between $8x$ and $2x$

(10 × 1 = 10 Marks)

PART -B

Answer any *eight* questions. Each question carries 2 marks.

11. If $xy/x+y = 1$ and $x \neq y$ find x in terms of y?
12. Find the 9th term of 1, 4, 7,
13. Find the interest rate p.a if simple interest on Rs 7000 is Rs 650 for 3 years?
14. Define Upper triangular and Lower triangular matrix?

15. If $A = \begin{bmatrix} 2 & 7 \\ 4 & 9 \end{bmatrix}$ $B = \begin{bmatrix} 5 & -3 \\ 6 & 9 \end{bmatrix}$ find $7A - 4B$
16. If $A = \{1,3,4\}$ find $A \times A$?
17. Calculate median from the following 35, 26, 45, 50,81, 67,90, 38,52, 60.
18. Define positive and negative skewness.
19. What are the methods of describing set with example?
20. Which term of the series $12+ 9+6+ \dots$ is -100?

(8 × 2 = 16 Marks)

PART – C

Answer any *six* questions. Each question carries 4 marks.

21. Solve $x + y = 6$ and $xy = 8$.
22. Find the sum of natural numbers between 300 and 500 which are divisible by 4.
23. Three numbers are in G.P their product is 512 find the middle number if the numbers are in ascending order.
24. Two equal amounts of money are deposited in two different banks each at 12% p.a simple interest for 8 years and 3.5 years respectively. If the difference between their interests is Rs. 540 find each sum.
25. Using Venn diagram in a class of 30 students 20 like maths, 18 like science and 12 like both the subject. Find the number of students who likes no subject.
26. Find mean median and mode from the following 700, 100, 500, 130, 250, 80, 422.
27. What are the factors responsible for seasonal variation?
28. Find the sum of $7+77+777+ \dots$

(6 × 4 = 24 Marks)

PART-D

Answer any *two* questions. Each question carries 15 marks.

29. Find coefficient of variation and variance from the following data

Class	0-5	5-10	10-15	15-20	20-25	25-30
Frequency	6	8	10	15	12	9

30. Find the inverse of $A = \begin{bmatrix} 5 & -6 & 4 \\ 7 & 4 & -3 \\ 2 & 1 & 6 \end{bmatrix}$

31. Find Quartile deviation and coefficient of quartile deviation from the data.

Size	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89
Frequency	5	8	17	29	30	20	10	1

(2 × 15 = 30 Marks)
