

22U308S

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Name:

Reg No:.....

THIRD SEMESTER B.Com./B.B.A. DEGREE EXAMINATION, NOVEMBER 2023

(CUCBCSS - UG)

CC15U GN3 A11 (2) - BASIC NUMERICAL SKILLS

(General Course)

(2015 to 2018 Admissions - Supplementary)

Time: Three Hours

Maximum: 80 Marks

Part A

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

1. One solution of the equation $\frac{2}{3}x = 8$ is _____
2. Simultaneous equations means a set of equations in _____ unknowns.
3. What is the common difference of the arithmetic progression 4, -8, -20, _____?
4. If A matrix of order 3 x 7 and B is order of 7 x 4, then AB is of order _____
5. A well defined collection of defined object is called _____
6. The point whose Co-ordinate is (-1, 1) lies in _____ quadrant.
7. Set of all those element which belongs to the universal set but not belonging to set A is called _____
8. Lorenz Curve is used to study _____
9. Kelley's coefficient of skewness is based on _____
10. In one dimensional diagram _____ will represent the magnitude of observation.

(10 × 1 = 10 Marks)

Part B

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

11. If $A = \{1,2,3,4\}$, $B = \{3,4,5,6\}$, $C = \{5,6,7,8\}$ and $D = \{7,8,9,10\}$
Find $A \cap (B \cup C)$
12. What do you mean by Kurtosis?
13. Let $A = \begin{bmatrix} 2 & 4 \\ 3 & 2 \end{bmatrix}$, $B = \begin{bmatrix} 1 & 3 \\ -2 & 5 \end{bmatrix}$, $C = \begin{bmatrix} -2 & 5 \\ 3 & 4 \end{bmatrix}$. Find $A + C + B$
14. Solve the equation $(x - 3)(x - 4) = 0$
15. Define Null Matrix.
16. For the given AP =2,, 26, find the missing term in the blank place.
17. Find the amount to be paid at the end of three years if the Principal amount is Rs.1200 and at an interest 12% p.a.
18. What is a sample?
19. The average of 7 numbers is 39 and the average of 3 of them is 27. Find the average of other four.

20. Define mean deviation of set of numbers.

(8 × 2 = 16 Marks)

Part C

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

21. Calculate Median from the following data

Marks:	0-10	10-20	20-30	30-40	40-50
No. of students:	5	15	30	8	2

22. Find the amount to be paid at the end of 4 years on Rs. 2400 at 5% p.a. compounded annually.

23. Solve the equation using Matrices: $7x + 4y = 6$ and $9x + 6y = 6$

24. Insert three geometric means in between 1 and 256.

25. Explain the properties of Arithmetic Mean.

26. In a group of 70 people, 37 like coffee, 52 like tea and each person likes at least one of the two drinks. How many people like both coffee and tea?

27. If $A = \begin{bmatrix} 1 & 2 & -3 \\ 5 & 0 & 2 \\ 1 & -1 & 1 \end{bmatrix}$, $B = \begin{bmatrix} 3 & -1 & 2 \\ 4 & 2 & 5 \\ 2 & 0 & 3 \end{bmatrix}$, and $C = \begin{bmatrix} 4 & 1 & 2 \\ 0 & 3 & 2 \\ 1 & -2 & 3 \end{bmatrix}$

Verify $A + (B - C) = (A + B) - C$

28. Draw a histogram for the following data

Age in years	:	0-5	5-10	10-15	15-20	20-25	25-30	30-40	40-60
No. of students	:	5	15	25	50	40	30	20	16

(6 × 4 = 24 Marks)

Part D

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

29. Briefly explain the methods of data collection for a statistical enquiry.

30. Fit a straight line trend equation to the following data by the method of least squares.

Compute the trend values and also estimate sales for 2009 on the following data.

Year:	2004	2005	2006	2007	2008
Sales ('000):	10	12	14	10	15

31. Find the Fisher's Index Number from the following data

Items	A		B		C	
Year	Price	Quantity	Price	Quantity	Price	Quantity
2007	5	15	4	24	10	70
2008	8	32	9	72	13	65

(2 × 15 = 30 Marks)
