

21U305S

(Pages: 3)

Name:

Reg. No:

THIRD SEMESTER UG DEGREE EXAMINATION, NOVEMBER 2022

(CUCBCSS-UG)

CC15U GN3 A11 (1) / CC15U GN3 A11 (2) – BASIC NUMERICAL SKILL

(General Course)

(2015 to 2018 – Admissions – Supplementary/Improvement)

Time: Three Hours

Maximum: 80 Marks

PART – A

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

I. Choose the correct answer:

1. The best average to analyse speed is
(a) Harmonic Mean (b) Mode (c) Median (d) Geometric Mean
2. One common difference of the A.P 1,-1,-3,-5 _____ is
(a) 1 (b) -1 (c) -2 (d) 2
3. If A is a matrix of order 4x3 and b is a matrix of order 3x5 then the order of the product will be
(a) 4x3 (b) 3x5 (c) 4x5 (d) 3x3
4. Which of the following is true?
(a) $0 \in \{ \}$ (b) $0 \in C \{ \}$ (c) $0 \in \{0\}$ (d) $0 \in C \{0\}$
5. Simple interest for a sum of Rs.500 for 2 years at the rate of interest 8 Percent p.a is
(a) 580 (b) 420 (c) 80 (d) 16

II. Fill in the Blanks:

6. Mean and median of a series are 25. Then mode is _____
 7. Data regarding income, collected from village office records is a _____ data
 8. The number of observations falling within a class is called _____
 9. Co-efficient of Range is _____
 10. If Mean is 100 and standard deviation is 15 then coefficient of variation is _____
- (10 × 1 = 10 Marks)**

PART – B

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

11. What is Histogram?

12. If $A = \begin{bmatrix} 0 & -5 \\ 2 & 8 \\ 8 & 1 \end{bmatrix}$ Find $2A$

(1)

Turn Over

13. Distinguish between simple interest and compound interest.
14. Define mean.
15. Solve $2(x + 1) + 3(y - 1) = 11$,
 $4x3y = 18$.
16. What is kurtosis?
17. Find the 20th term of the A.P whose first term is 5 and common difference is 2.
18. Find the 8th term of the G.P $1, \frac{1}{2}, \frac{1}{4}, \frac{1}{8}$ _____
19. Define Karl Pearson's co-efficient of Skewness.
20. A distribution consists of 3 components with total frequencies 200, 250 and 300 having means of 25,10 and 15 respectively. Find out mean of combined distribution?

(8 × 2 = 16 Marks)

PART – C

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

21. Calculate QD and its coefficient for the data given below
 X :- 2-5 5-8 8-11 11-14 14-17
 Y:- 2 5 9 12 2
22. During 10 weeks of the session the marks scored by two candidates Jayanth and Vasanth taking the computer programme course are given below
 Jayanth : 58 59 60 54 65 66 52 75 69 52
 Vasanth : 87 89 78 71 73 84 65 66 56 46
 Who is more consistent? Who is more efficient?
23. Why the standard deviation considered to be the best measure of dispersion? Explain the advantages and disadvantages of standard deviation.
24. Find the sum of all integers (whole numbers) in between 10 and 200 which is exactly divisible by 7.
25. The first term of a series in AP is 4.2 and the sum of the first 5 term is 178.5. Find the 5th term.
26. In what time will a sum of money double itself at 10% p.a simple interest?
27. Calculate geometric mean of the following figures. 57.5, 87.75, 53.5, 73.5, 81.75
28. Find the Karl Pearson's Co- efficient of Skewness from the following data

X	3	4	5	6	7	8	9	10
F	7	10	14	35	102	136	43	8

(6 × 4 = 24 Marks)

PART – D

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

29. Construct the index number of prices from the following data using
 (a) Lasperyer's (b) Paasche's (c) Fisher's formula

Commodity	2000		2001	
	Price	Quantity	Price	Quantity
A	10	50	18	56
B	6	100	10	120
C	8	60	14	60
D	14	30	20	25
E	12	40	18	35

30. What do you mean by statistics? Explain the various methods used for data collection.

31. If $A = \begin{bmatrix} 2 & 3 & 4 \\ 5 & 7 & 9 \\ -2 & 1 & 1 \end{bmatrix}$ and $B = \begin{bmatrix} 4 & 0 & 5 \\ 1 & 2 & 0 \\ 0 & 3 & 1 \end{bmatrix}$ Verify that $(AB)' = B' A'$

(2 × 15 = 30 Marks)
