

21U307S

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Name:

Reg No:

THIRD SEMESTER B.Voc. DEGREE EXAMINATION, NOVEMBER 2022

(Food Processing and Technology - Common Course)

CC18U GEC3 NS08 - BASIC NUMERICAL SKILL

(2018 to 2020 Admissions – Supplementary/Improvement)

Time: Three Hours

Maximum: 80 Marks

Part A

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

1. In a Venn diagram represents the universal set.
2. If 3, x, 12 are in G.P, then x is
3. If A is a matrix of order 5 x 2 and B is a matrix of order 2 x 4, then the order of AB is
4. A matrix in which every element is one, is called
5. Coefficient of Quartile deviation =
6. In index numbers we use price as weights.
7. For a distribution mean = 20, mode=25, S.D = 10, then coefficient of skewness is
8. is an ideal measure of dispersion.
9. If a, b, c are in then b =
10. The sales of a departmental store on Onam and Christmas are associated with the component of the time series.

(10 × 1 = 10 Marks)

Part B

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

11. If $A = \{11, 14, 15, 16\}$ $B = \{12, 14, 16, 18\}$ and $C = \{19, 15, 16, 20\}$. Find $A \cap (B \cup C)$.
12. Compute G.M of the following figures: 57.5, 87.75, 53.5, 73.5, 81.75.
13. Find Mode from the following values: 12, 35, 15, 40, 55, 21, 60, 45.
14. Solve the equation $(x-3)(x-4) = 0$.
15. What is a sample?
16. What are the limitations of statistics?
17. Define coefficient of variation.
18. Find the amount to be paid at the end of three years if the principal amount is Rs. 1,200 and at an interest 12% p.a.
19. Define index numbers.
20. Define Kurtosis.
21. What is a schedule?
22. The average of 7 numbers is 39 and the average of 3 of them is 27. Find the average of the other four.

(8 × 2 = 16 Marks)

Part C

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

23. If the 5th term and 12th term of an Arithmetic Progression are 30 and 65 respectively, find the sum of its 26 terms.
24. Briefly explain the components of Time series.
25. What are the steps in conducting a sample survey?
26. Obtain the mean deviation about mean for the data given below: 25,26,32,42,38,34.
27. Explain the difference between primary data and secondary data.
28. Find simple interest on 3000 at 7% rate of interest for one year
29. Draw the ogive for the following data:

Class Interval	20-30	30-40	40-50	50-60	60-70
Frequency	15	30	40	28	17

30. Find the two consecutive numbers in AP whose sum is 36 and their product is 288.

31. Find the determinant of $\begin{bmatrix} 2 & 5 & 8 \\ 1 & 5 & 2 \\ 3 & 5 & 4 \end{bmatrix}$.

(6 × 4 = 24 Marks)

Part D

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

32. Discuss the methods for measuring trend.
33. Using the following data calculate Laspayre's, Paasche's and Fisher's Ideal Index Number.

Commodity	2017		2018	
	Quantity	Price	Quantity	Price
A	10	60	14	65
B	18	105	20	100
C	30	70	35	80
D	50	10	45	12
E	63	38	70	50

34. Solve using Cramer's rule:
- $$2x + y - 3z = -4$$
- $$4x - 2y + z = 9$$
- $$3x + 5y - 2z = 5.$$
35. Compute the coefficient of variation for the given data and check which team is more consistent.
- Team A: 25, 24, 30, 32, 26, 23.
- Team B: 20, 22, 21, 25, 30, 22.

(2 × 15 = 30 Marks)
