20U365 (Pages: 3) Name: ……

Reg. No: ……

THIRD SEMESTER B.Voc. DEGREE EXAMINATION, NOVEMBER 2021

(CUCBCSS – UG)

(Regular/Supplementary/Improvement)

CC18U GEC3 NS08 - BASIC NUMERICAL SKILL

(Food Processing and Technology - Common Course)

(2018 Admission onwards)

Time: Three Hours Maximum: 80 Marks

Part A

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

1. The sets of {MARCH} and {CHARM} are ---------- sets.
2. The values of a variable chronologically ordered over a successive period of time is called ----------
3. If 3, x,12 are in GP ,then x = ----------
4. ---------- is a statement of equality between two expressions.
5. When the measure of kurtosis is less than 3, the distribution is ----------
6. When A = {a,b}, its power set has ---------- number of elements.
7. The smallest and the largest possible measurements in each class are known as ----------
8. When interest is compounded quarterly we take rate of interest as ----------
9. ---------- is called positional average.
10. If mean < median < mode, the distribution is ----------

(10 × 1 = 10 Marks)

Part B

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

11. What are Measures of Dispersion?
12. If A = $\begin{bmatrix} 2 & -1 \\ 0 & 3 \end{bmatrix}$ and B = $\begin{bmatrix} 7 & 0 \\ -2 & -3 \end{bmatrix}$ write down A+B.
13. What is cyclic variation?
14. If the Arithmetic mean = 24.6 and the mode = 26.1. Find the value of the median.
15. Distinguish between Simple and Compound interest.
16. If Q_1 = 4.13, Q_2 = 5.73 and Q_3 = 7.11. Calculate the Bowley's Coefficient of Skewness.
17. What are the characteristics of Statistics?
18. Given below the monthly income of 10 families. Calculate the mean.

    1600, 1560, 1440, 1530, 1670, 1860, 1750, 1910, 1490, 1800

19. Distinguish between Diagrams and Graphs.

20. The price of milk per litre was Rs10 in1990. In 1995 it was sold at Rs.20 per litre. Taking 1990 as the base year, find the percentage increase in the milk.

21. What are the desirable qualities of a good average?

22. Find the determinant of the matrix $\begin{bmatrix} 5 & 2 & 1 \\ 0 & 1 & 3 \\ 2 & 1 & 0 \end{bmatrix}$

(8 × 2 = 16 Marks)

Part C

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

23. Solve the system of equations with the help of matrices.

$5x+2y = 4,$

$7x+ 3y = 5$

24. Explain the different steps in the construction of a frequency table.

25. If $A = \begin{bmatrix} 1 & 2 \\ 3 & 4 \end{bmatrix}$ $B = \begin{bmatrix} 1 & 0 \\ 2 & -3 \end{bmatrix}$ $C = \begin{bmatrix} 1 & -1 \\ 0 & 1 \end{bmatrix}$. Show that $A(B + C) = AB + AC$

26. Find mean deviation from median and also its co-efficient

21, 29, 35, 10, 42, 75, 50, 30, 18, 80.

27. Find the sum of first 18 terms of the A.P. 9, -3, -15……and also find the sum of n^{th} term.

28. What are the precautions to be taken while using secondary data?

29. The difference between SI and CI for 2 years @ 20% per annum is Rs 8. What is the principal?

30. From the following draw a Multiple Bar Diagram.

Year	Production (in units)		
	A	B	C
2008	45	55	65
2009	35	60	70
2010	50	70	80
2011	55	80	60

31. Using the following data calculate Fisher's Ideal Index Number.

Commodity	**2018**		**2019**	
	Quantity	**Price**	**Quantity**	**Price**
A	50	32	50	40
B	35	30	40	35
C	55	16	50	18

(6 × 4 = 24 Marks)

Part D

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

32. What are the methods of collecting Primary Data? Explain.

33. A manufacturer of radio sets produced 600 units in the third year and 700 units in the seventh year. Assuming that the production uniformly increases by a fixed number every year: Find:

a) The production in the first year.

b) The production in the 10^{th} year.

c) The total production in 7 years.

34. Draw frequency polygon with Histogram using the following data

Marks	:	0-10	10-20	20-40	40-50	50-60	60-70	70-90	90-100
Frequency	:	4	6	14	16	14	8	16	5

35. Calculate Mean and Standard Deviation for the data given below:

Age (years)	10-19	20-29	30-39	40-49	50-59	60-69	70-79
Frequency	3	61	223	137	53	19	4

(2 × 15 = 30 Marks)

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