19U350 (Pages: 2) Name: .....

Reg.No: .....

THIRD SEMESTER B.Sc. DEGREE EXAMINATION, NOVEMBER 2020

(CBCSS - UG)

CC19U FTL3 A11B - BASIC NUMERICAL SKILLS

(Food Technology - Common Course)

(2019 Admission - Regular)

Time : 2.5 Hours Maximum : 80 Marks

Credit : 4

Part A (Short answer questions)

Answer ***all*** questions. Each question carries 5 marks.

1. What is idempotent matrix?
2. Find the Co – factors of Matrix $A = \begin{bmatrix} 2 & 5 \\ 4 & 3 \end{bmatrix}$
3. Solve $7x - 8y = -12, -4x + 2y = 3$
4. Solve 5x + 7x = 72
5. Write down Quadratic Equation.
6. What is break even point ?
7. Find the sum of first n natural numbers
8. Find A.M between 4 and 8.
9. What is GP? Give an example.
10. What is the difference between Primary data and secondary data?
11. Define Bar Diagram.
12. Differentiate class limits and class boundaries.
13. Three years ago the average age of a family of 6 members was 19years. A baby having been born, the average age of the family is the same today. What is the age of the baby?
14. Explain the term skewness.
15. Define Fisher's index Number.

(Ceiling: 25 Marks)

Part B (Paragraph questions)

Answer ***all*** questions. Each question carries 5 marks.

16. What is cartesian product ? If A={1, 2, 3} B={a, b} Find A × B and B × A. Are they equal?

17. Factorize (i) $6x^2 + x - 2$ (ii) $6x^2 - 47x + 77$

18. Determine the AP whose 3rd term is 5 and the 7th term is 9.

19. Insert 5 geometric means between 2 and 1458.

20. Defiene scope of statistics.

21. Find geometric mean.

Marks	:	0-30	30-50	50-80	80-100
No of students	:	20	30	40	10

22. Find QD and its coefficient.

Wages	:	Below 5	Below 10	Below 15	Below 20	Below 25	Below 30
No of workers	:	4	10	13	21	33	40

23. Define components of Time Series.

(Ceiling: 35 Marks)

Part C (Essay questions)

Answer any ***two*** questions. Each question carries 10 marks.

24. If U={1,2,3,4,5,6,7,8} A={1, 2, 3} B={2, 4, 5} C={2, 4, 6} Verify De morgan's Law

25. Find the solution

$$2x + 5y + 2z = -38$$
$$3x - 2y + 4z = 17$$
$$-6x + y - 7z = -12$$

26. Calculate the amount and compound interest on

(a) Rs. 10800 for 3 years at $12\frac{1}{2}$ % per annum compounded annually

(b) Rs. 18000 for $2\frac{1}{2}$ years at 10 % per annum compounded annually

(c) Rs. 62500 for $1\frac{1}{2}$ years at 8% per annum compounded half yearly

27. The scores of a batsman in 10 different matches is where 38, 70, 48, 34, 42, 55, 63, 46,54,44. Find the MD and SD of these scores.

(2 × 10 = 20 Marks)

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