LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

B.Com. DEGREE EXAMINATION – COMPUTER APPLICATIONS
FIRST SEMESTER – NOVEMBER 2022
UCC 1502 – BUSINESS MATHEMATICS AND STATISTICS

Date: 23-11-2022   Dept. No.   Max. : 100 Marks
Time: 01:00 PM - 04:00 PM

SECTION A

Answer ALL questions: **(10 X 2 =20 Marks)**

1. Define Statistics.

2. Write the formula for Mode.

3. Mention the core formula for Probability of an event.

4. Define the term Vector.

5. Define Transpose Matrix with example.

6. Write the formula for DeMorgan's Law.

7. List the difference between Harmonic Mean and Arithmetic Mean.

8. Write the outline of Venn-Diagram.

9. Give the instances for Null SET.

10. Define Scalar quantity.

SECTION B

Answer any FOUR questions: **(4 X 10 =40 Marks)**

11. Calculate standard deviation from the following data:

    9,27,18,54,45,72,36,63,81

12. . Compute Quartile Deviation and its coefficient.

Weight	0-10	10-20	20-30	30-40	40-50	50-60
No. of workers	8	20	25	30	12	5

13. From the following data calculate the Median.

x	10	15	8	20	18
f	24	6	30	16	26

14. From the following data, find out Mean:

Height (in Inches)	60	61	62	63	64
No. of Children	2	3	5	8	7

15. Calculate the median for the following data:

Class interval	120-150	150-180	180-210	210-240	240-270	270-300	300-330	330-360
Frequency	25	65	135	430	320	175	79	21

16. There are 50 Chips serially numbered from 1 to 50. One chip is drawn at random. What is the probability that its number is
    a. 6
    b. Divisible by 3
    c. A Multiple of 4 or 5?

17. Define Vector and explain the types of Vectors in detail.

SECTION C

Answer any TWO questions: **(2 X 20 = 40 Marks)**

18. Explain the concept "Measures of Central Tendency". Explain in detail with examples.

19. A bag contains 8 red 10 white and 12 black balls. 4 balls are draws randomly what is the probability that

    1. 2 Balls are black and 2 is not black
    2. 3 Balls are red and 1 is not red.

20. From a pack of well shuffled cards, one card is drawn at random. find the probability that it is
    i. An Ace ii. A Spade iii. A Clubs iv. A spade or a clubs

21. Let A and B be any two sets, Prove that as per DeMorgan's Law.

    (A U B)' = A' ∩ B' Prepare Venn diagram and interpret the law.

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