# LOYOLA COLLEGE (AUTONOMOUS), CHENNAI - 600034 

B.B.A. DEGREE EXAMINATION - BUSINESS ADMINISTRATION

SECOND SEMESTER - APRIL 2022
UBU 2502 - BUSINESS STATISTICS
(19 \& 20 BATCHES)

Date: 18-06-2022
Dept. No. $\square$ Max. : 100 Marks
Time: 01:00 PM - 04:00 PM

## PART - A

Q. No

Answer ALL questions
(10 * 2 = 20 Marks)

1. Define Statistics.
2. What is Primary data?
3. What is Quota Sampling?
4. List any two merits of mode.
5. What is called Mean Deviation?
6. Give any two uses of Correlation.
7. Give the meaning of Regression?
8. What is Time Series?
9. What is called cyclical Variation?
10. Secular trend: - Meaning.

## PART - B

## Answer any FOUR questions

11. Enlighten us on the scope of Statistics?
12. Compute the Harmonic mean for the following data:

| x | 10 | 12 | 14 | 16 | 18 | 20 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| f | 5 | 18 | 20 | 10 | 6 | 1 |

13. Calculate the three Quartile for the following data

| Series | 3 | 6 | 9 | 12 | 15 | 18 | 21 | 24 | 27 | 30 | 33 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |

14. Calculate the Bowleys coefficient of Skewness

| Number of <br> Children Per <br> family | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Number of <br> Families | 7 | 10 | 16 | 25 | 18 | 11 | 8 |

15. List out the Merits and Demerits of the Scatter Diagram.
16. Calculate Rank Correlation for the following data:

| Marks in Maths | 85 | 60 | 73 | 40 | 90 |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Marks in Statistics | 93 | 75 | 66 | 50 | 80 |

17. Fit a trend line to the following data by Freehand Method

| Year | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Sales | 65 | 95 | 85 | 115 | 110 | 120 | 130 |

## PART - C

Answer any TWO questions
18. Determine the mean, mode, and the median from the following data

| X | $1-10$ | $11-20$ | $21-30$ | $31-40$ | $41-50$ | $51-60$ | $61-70$ | $71-80$ | $81-90$ | $91-100$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| F | 328 | 350 | 720 | 664 | 598 | 524 | 328 | 350 | 720 | 664 |

19. Calculate Karl Pearson's Coefficient of Skewness for the following data.

| 25 | 15 | 23 | 40 | 27 | 25 | 23 | 25 | 20 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |

20. Calculate the correlation coefficient from the following data

| X | 3 | 5 | 6 | 7 | 9 | 12 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| F | 20 | 14 | 12 | 10 | 9 | 7 |

21. Briefly explain the different components of the Time Series.
