Reg. No. : ....

Name : ....

Fourth Semester B.Com. Degree Examination, August 2022

First Degree Programme under CBCSS

Complementary Course

CO 1431/CX 1431/CC 1431/HM 1431 : BUSINESS STATISTICS

**(Common for Commerce/Commerce & Tax Procedure and Practice/
Commerce with Computer Application/Commerce & Hotel Management
and Catering)**

(2018 Admission)

Time : 3 Hours

Max. Marks : 80

SECTION – A

Answer **all** questions in **one** or **two** sentences. **Each** question carries **1** mark.

1. Define standard deviation

2. What is meant by coefficient of determination?

3. What is positive correlation?

4. State two functions of statistics

5. What is Type I error?

6. What is price index?

7. What is meant by chain index number?

8. What is normal distribution?

9. What is linear regression?

10. What is time series?

(10 × 1 = 10 Marks)

SECTION – B

Answer any **eight** questions in not exceeding **one** paragraph each. **Each** question carries **2** marks.

11. Define statistics.

12. What is time reversal test?

13. What is probability sampling?

14. What is meant by absolute measure of dispersion?

15. State the formula for finding Spearman's rank correlation.

16. What is Sensex?

17. Define primary data.

18. Give two examples of qualitative data.

19. Define regression

20. What is cost of living index?

21. What is meant by trend?

22. List four uses of index numbers.

(8 × 2 = 16 Marks)

SECTION – C

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

23. For the following values, find standard deviation

    5,8,7,11,9,10,8,2,4,6

24. How will you interpret coefficient of correlation on the basis of probable error?

25. Calculate Karl Pearson's correlation coefficient between x and y from the following data

    $N = 20 \quad \sum x = 35 \quad \sum x^2 = 203 \quad \sum y = 28 \quad \sum y^2 = 140 \quad \sum xy = 168$

26. You are given the following data. Using the simple average of price relatives prepare index for 2022.

Commodity	Price in Rs.	
	2020	2022
X	170	220
Y	140	180

27. Construct the cost of living index number form the following

Group:	A	B	C	D	E
Index:	350	200	240	150	250
Weight	5	2	3	1	2

28. How is time series analysis useful for business men?

29. What are the problems peculiar to cost of living index computation?

30. Explain simple, partial and multiple correlations.

31. Define quartile deviation and also list its merits.

(6 × 4 = 24 Marks)

N – 7906

SECTION – D

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

32. Find out the coefficient of correlation between age and playing habit of the following students:

    Age: 15   16   17   18   19   20

    No.of students: 250 200 150 120 100 80

    No.of regular players: 200 150 90   48   30   12

33. Given the following data, calculate Fisher's Ideal index number

Year	Cotton		Jute	
	Price	Quantity	Price	Quantity
2020	70	7	62	3
2021	80	6	74	2

34. The following are the annual profits in a certain business. Using the method of least squares fit a straight line to the above data. Also make an estimate of the profit in 2022.

    Year: 2015 2016 2017 2018 2019 2020 2021

    Profit in '000s: 60   72   75   65   80   85   95

35. Define statistics and discuss the scope of statistics.

    (2 × 15 = 30 Marks)

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