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N – 7905

Reg. No. :

Name :

Fourth Semester B.Com. Degree Examination, August 2022

First Degree Programme Under CBCSS

Complementary Course

CO 1431/CX 1431/CC 1431 — BUSINESS STATISTICS

**(Common for Commerce/Commerce and Tax Procedure and
Practice/Commerce with Computer Application)**

(2017 Admission)

Time : 3 Hours

Max. Marks : 80

SECTION – A

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

1. Define statistics.
2. What is correlation?
3. What is regression?
4. Define Arithmetic mean.
5. What is meant by trend?
6. What is price relative?
7. Mention two functions of statistics.

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8. Write the regression equation Y on X.
9. What is a scatter diagram?
10. What is tabulation?

(10 × 1 = 10 Marks)

SECTION – B

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

11. What are the methods of studying variation?
12. Calculate the AM of 12,18,14,15,16.
13. What is coefficient of determination?
14. What is the principle of least squares?
15. Is statistics a science? Substantiate.
16. What is range?
17. What are the various methods of studying correlation?
18. What is multiple regression?
19. What is deflating?
20. What is seasonal variation?
21. What is Interquartile Range?
22. Mention two uses of regression in business.

(8 × 2 = 16 Marks)

SECTION – C

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

23. Explain the functions of statistics.
24. What are the methods of measuring correlation?
25. Explain the difference between correlation and regression.
26. Why index numbers are called economic barometers?
27. Calculate Geometric Mean of 4,6,9,11 and 15.
28. Sum of the products of the deviations of the variables X and Y from their respective means is 1,320. Sum of the squares of deviations of X and Y variables from their respective means are 628 and 3,720. Find the coefficient of correlation.
29. From the following data, find the most likely production corresponding to a rainfall 20"

	Rain fall	Production
Mean	15"	250 kg
Standard deviation	2.5"	50 kg
Coefficient of correlation = 0.4		

30. For the following data compute simple index numbers

Commodity :	Rice	Wheat	Ghee	Sugar
Price in 2018 :	20	30	20	10
Price in 2020 :	40	45	50	30

31. Draw a trend line by the semi average method for the following data:

Year:	1993	1994	1995	1996	1997	1998	1999	2000
Production (in tons):	55	62	65	58	65	72	75	68

(6 × 4 = 24 Marks)

SECTION – D

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

32. Explain the meaning of times series analysis. Mention the four components ,into which a time series may be analysed.

33. Calculate correlation coefficient for the following data:

X: 2 4 5 6 8 11

Y: 18 12 10 8 7 5

34. From the following bivariate data fit the regression line Y on X and predict Y if X = 20.

X: 4 12 8 6 4 4 16 8

Y: 14 4 2 2 4 6 4 12

35. Compute (a) Laspeyre's (b) Paasche's and (c) Fisher's index number for the following data:

Item	Price		Quantity	
	Base Year	Current Year	Base Year	Current Year
A	6	10	50	50
B	2	2	100	120
C	4	6	60	60
D	10	12	30	25

(2 × 15 = 30 Marks)