K24U 1689

Reg. No. : .....

Name : .....

Second Semester B.Com./B.Com. (Logistics) Degree (CBCSS-OBE-Regular/Supplementary/Improvement) Examination, April 2024
(2019 Admission Onwards)
COMPLEMENTARY ELECTIVE COURSE
2C01 COM : Quantitative Techniques for Business Decisions

Time : 3 Hours Max. Marks : 40

SECTION – A

Answer **any six** questions. **Each** question carries **1** mark.

1. How we can compute probable error ?
2. Write any two utility of time series analysis.
3. Write the regression equation Y on X.
4. What is type II error ?
5. What do you mean by line of best fit ?
6. What is two tail test ?
7. Find the total number of ways in which the letters of the word 'COIN' be arranged.
8. Given that bxy is 0.716 and byx is 1.11 find the value of correlation coefficient. **(6×1=6)**

SECTION – B

Answer **any six** questions. **Each** question carries **3** marks.

9. Write a short note on components of a time series.
10. You are given the following data about advertising and sales ;

	Advertising (In Lakhs)	**Sales (In Lakhs)**
Mean	10	90
S.D.	3	12

The correlation coefficient is 0.8

Calculate the two regression lines.

P.T.O.

11. Differentiate between linear and nonlinear correlation.
12. Define normal distribution. What are its properties ?
13. A box containing 5 green balls and 3 red colour balls. Find the probability of selecting 3 green balls one by one
    i) without replacement.
    ii) with replacement.
14. What are the uses of regression analysis ?
15. If 2% of electric bulbs manufactured by a certain company are defective. Find the probability that in a sample of 200 bulbs :
    i) less than 2 bulbs
    ii) more than 3 bulbs are defective ($e^{-4} = 0.0183$).
16. Differentiate between parametric and nonparametric test. **(6×3=18)**

SECTION – C

Answer **any two** questions. **Each** question carries **8** marks.

17. Find a 4 yearly moving average and the centered 4 year moving average from the following data.

Year	2008	2009	2010	2011	2012	2013	2014	2015
Output	301	454	393	414	424	464	466	492

18. Calculate Karl Pearson's Coefficient of correlation between demand and price.

Sales (lakhs)	50	60	55	65	75	70	75	80	90	80
Units ('000)	10	14	15	11	12	15	16	20	18	19

19. What do you mean by hypothesis ? Briefly explain the procedure for hypothesis testing. **(2×8=16)**

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