K25U 1384

Reg. No. : ....

Name : ....

Second Semester B.Com./B.Com. (Logistics) Degree (CBCSS – OBE – Supplementary/Improvement) Examination, April 2025
(2019 to 2023 Admissions)
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.   (6×1=6)

1. What is meant by seasonal variation ?

2. What is non-linear regression ?

3. Distinguish between type I and type II error.

4. What is scatter diagram ?

5. Distinguish between permutation and combination.

6. What do you mean by level of significance ?

7. State any two properties of regression coefficient.

8. Write a short note on T-test.

SECTION – B

Answer **any six** questions. **Each** question carries **3** marks.   (6×3=18)

9. Given that co-efficient of correlation for 9 samples is 0.685. Compute probable error and standard error.

10. State the steps involved in chi-square test.

11. A committee is to be constituted by setting two people at random from a group consisting of 3 economist and 4 statisticians. Find the probability that the committee will consist of

    i) 2 economist

    ii) 2 statisticians

    iii) 1 economist and 1 statistician.

P.T.O.

12. Differentiate between one-tailed and two-tailed tests.

13. Explain the properties of binomial distribution.

14. What is null hypothesis ? How it is different from alternate hypothesis ?

15. It is known from past experience that in a certain plant there are on the average 4 industrial accidents per month. Find the probability that in a given year there will be less than 4 accidents. Assume Poisson distribution. $e^{-4} = 0.0183$.

16. Calculate 3 yearly moving average from the following data.

Year :	2008	2009	2010	2011	2012	2013	2014	2015
Output :	1632	1557	1652	2100	2620	3120	3236	3562

SECTION – C

Answer **any two** questions. **Each** question carries 8 marks. (2×8=16)

17. The ranking of 10 countries in international tourism expenditure in a gap of a decade are given below.

Countries	Rank in 2005	Rank in 2015
U.S.A.	1	1
Germany	2	2
Japan	4	3
UK	3	4
Italy	10	5
France	5	6
Canada	6	7
Netherland	7	8
Austria	8	9
Taiwan	9	10

Compute Spearman's rank correlation coefficient.

18. Define time series. What are the methods of measurement of trend ?

19. The following data gives the age and blood pressure of ten persons.

Age	56	42	36	47	49	42	60	72	63	55
BP	147	125	118	128	145	140	155	160	149	150

Determine regression equation of X on Y and Y on X.