

K22U 1245

Reg. No. :

Name :

**II Semester B.Com. Degree (C.B.C.S.S. – O.B.E. – Regular/
Supplementary/Improvement) Examination, April 2022
(2019 Admission Onwards)**

COMPLEMENTARY ELECTIVE COURSE

2C01COM : Quantitative Techniques For Business Decisions

Time : 3 Hours

Max. Marks : 40

PART – A

Answer **any six** questions from the following. **Each** question carries **1** mark.

1. What is Partial Correlation ?
2. What is Exhaustive Events ?
3. Define Regression Analysis.
4. What is a Type II error ?
5. What is Parametric Test ?
6. What is Spearman's Rank Correlation ?
7. What is an Independent Event ?
8. What is Null Hypothesis ?

(6×1=6)

PART – B

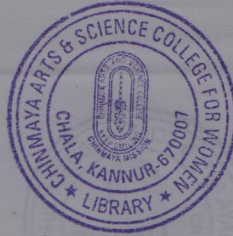
Answer **any six** questions from the following. **Each** question carries **3** marks.

9. Distinguish between Correlation and Regression Analysis.
10. Probability that a man will be alive 25 years hence is 0.3 and the probability that his wife will be alive 25 years hence is 0.4. Find the probability that 25 years hence.
 - i) both will be alive
 - ii) only the man will be alive
 - iii) at least one of them will be alive
11. Explain various components of Time Series.
12. From the following table showing age of cars of a certain make and annual maintenance costs, obtain the regression equation for cost related to age.

Age of cars (yrs.)	2	4	6	7	8	10	12
Annual Maintenance	1600	1500	1800	1900	1700	2100	2000

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13. Given $r = 0.8$, $\sum xy = 60$, $\sum x^2 = 90$, $\sigma_y = 2.5$. Find the number of items.
14. Two persons A and B attempt independently to solve a puzzle. The probability that A will solve is $\frac{3}{5}$ and the probability that B will solve is $\frac{1}{3}$. Find the probability that the puzzle will be solved by at least one of them.
15. The trend equation fitted to a series of sales data is given by $Y = 3200 + 400x$ (origin at 2005, x unit = 1 year, y = no. of units sold yearly). The company has the production capacity of 7200 units in a year. Find by what year will the company's expected sales have equated its present production capacity assuming that trend will continue as before.
16. Explain the following terms :
a) Sample space b) Sample point c) Event. **(6×3=18)**

PART – C

Answer **any two** questions from the following. **Each** question carries **8** marks.

17. The following table gives the distribution of total population and those who are wholly or partially blind among them. Find if there is any relation between age and blindness.

Age	No. of persons	Blind
0 – 10	100	55
10 – 20	60	40
20 – 30	40	40
30 – 40	36	40
40 – 50	24	36
50 – 60	11	22
60 – 70	6	18
70 – 80	3	15

18. In a study about tea habit in towns following data was observed in a sample size 100 each.
Town A : 51% persons were male, 31% were tea drinkers and 19% were male tea drinkers.
Town B : 46 % were male, 26% were tea drinkers and 17% were male tea drinkers.
Is there any association between sex and tea habits ? If so, in which town it is greater ?
19. Explain Karl Pearson's Correlation, its properties and assumptions. **(2×8=16)**