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Reg. No. | | | | | | | | |

III Semester B.Com.(Tourism) LS/SP Degree Examination, April - 2022

COMMERCE

Quantitative Analysis for Business Decisions - II

(CBCS Scheme Repeaters)

Time : 3 Hours **Maximum Marks : 70**

Instructions to Candidates:

Answer should be written in English.

SECTION-A

I. Answer any **five** of the following questions. Each sub question carries **2** marks. **(5×2=10)**

1. a. Give the meaning of Correlation.
   b. Define the term Regression.
   c. State two components of Time series.
   d. Expand $(y-1)^5 = 0$.
   e. Mention the types of Sampling.
   f. What are independent events?
   g. What is interpolation?

SECTION - B

II. Answer any **Three** of the following questions. Each question carries **6** marks. **(3×6=18)**

2. Calculate rank correlation between the following marks (out of 30) in statistics and mathematics of ten students.

Student	1	2	3	4	5	6	7	8	9	10
Statistics	25	30	29	28	15	14	22	20	10	27
Mathematics	10	18	22	16	25	30	14	24	13	20

3. Estimate the missing value of production using Binomial Expansion formula :

Year	2015	2016	2017	2018	2019	2020
Production (in Crores)	320	300	?	280	278	250

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4. Calculate trend values by the method of least squares from the following data :

Year	2016	2017	2018	2019	2020	2021
Sales in tonnes	50	60	65	63	68	70

5. One card is drawn from a standard pack of 52. What is the probability that it is

   a. Spade; b. A King; c. The ace of club

6. What are different methods of probability sampling?

SECTION - C

Answer any **three** of the following questions. Each question carries **14** marks. **(3×14=42)**

7. Calculate the Coefficient of Correlation between density of population and death rate.

Density of Population	200	500	400	700	600	300
Death Rate	10	16	14	20	17	13

8. Calculate the regression equation of y on x from the following data and predict the value of y when x is 15.

X	10	15	17	20	25	24	23	12	13	9
Y	18	12	8	7	10	5	20	14	15	6

9. From the following data find out the number of students who secured more than 40 but less than 45 marks.

Marks	30-40	40-50	50-60	60-70	70-80
No. of students	31	42	51	35	31

10. The following are the annual sales (in Rs.) in a certain business.

Years	2014	2015	2016	2017	2018	2019	2020
Sales (in Rs.)	75	67	68	65	50	54	41

   a. Fit a straight line trend to these figures by the method of least squares.

   b. Plot the trend values on a graph.

   c. Estimate the sales for the year 2021.

11. 10 students obtained the following marks in Statistics and Accountancy. Calculate Rank Correlation :

Marks in Statistics	81	90	21	87	98	80	98	90	98	70
Marks in Accountancy	75	73	85	70	76	82	65	76	68	80