Day : Tuesday

Time : 10:00 AM-01:00 PM

Date : 17/1/2023

W-18819-2022

Max. Marks : 60

N.B.:

1) Attempt **ANY THREE** questions from Section-I. Each question carries 10 marks.
2) Attempt **ANY TWO** questions from Section-II. Each question carries 15 marks.
3) Answers to both the sections should be written in **SAME** answer book.
4) Use of non-programmable **CALCULATOR** is allowed.

SECTION-I

Q.1 Define the terms Correlation and Regression. Distinction between Correlation and Regression.

Q.2 Calculate mean, median and mode for the following data.

Marks	10-20	20-30	30-40	40-50	50-60	60-70	70-80
No. of students:	6	12	20	25	13	8	3

Q.3 Two fair dice are thrown. Find the probability that
   i) The total score is 10
   ii) Sum of the scores is a prime number.

Q.4 Find the association between literacy and unemployment from the following data and comment on the result
   Total Adults: 10000
   Literate: 1290
   Unemployed: 1390
   Literate Unemployed: 820

Q.5 Write short notes on (**ANY TWO**):

   a) Scatter Diagram
   b) Quartiles, deciles and percentiles
   c) Conditional probability

SECTION-II

Q.6 From the data given below find:
   i) The two regression equations.
   ii) The coefficient of correlation between the marks in Economics and Statistics.
   iii) The most likely marks in Statistics when marks in Economics are 30.

Marks in Economics	25	28	35	32	31	36	29	38	34	32
Marks in Statistics:	43	46	49	41	36	32	31	30	33	39

Q.7 Calculate coefficient of variation from following data and state which batsman is more consistent.

Score of A	32	28	47	63	71	39	10	62	96	14
Score of B	19	31	48	53	67	90	10	62	40	80

Q.8 A textile mill produces cloth in three different shades blue, green and yellow. The production of these shades is 30%, 50% and 20% respectively of the total production. From past experience it is seen that 2%, 3% and 4 % of blue, green and yellow shades are defective respectively. On general inspection of entire production a specimen is selected at random and found to be defective. Find the probability that
   i) It is of blue shade.
   ii) It is of green shade.
   iii) It is of yellow shade.

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