

MASTER OF BUSINESS ADMINISTRATION (CBCS - 2020 COURSE)

M.B.A Sem-I : WINTER : 2021

SUBJECT: STATISTICAL TECHNIQUES

Day : Monday
Date : 24-01-2022

W-22771-2021

Time : 02:00 PM-04:00 PM
Max. Marks: 50

N.B.

- 1) Attempt any **THREE** questions from Section I and attempt any **TWO** questions from Section II.
- 2) Both the Sections should be written in the **SAME** answer book.
- 3) Figures to the right indicate full marks
- 4) Use Graph paper if required. Use of **NON-PROGRAMMABLE** calculators is allowed

SECTION- I

- Q.1** The mean of the following frequency distribution was found to be 1.46. **(10)**

Number of accidents	Number of days
0	46
1	?
2	?
3	25
4	10
5	5
Total	200 days

Find the missing frequencies.

- Q.2** Asha, Brian and Deepak, are given a problem to solve. The chances that they can solve the problem are $\frac{1}{2}$, $\frac{1}{3}$ and $\frac{1}{4}$ respectively. What is the probability that the problem will be solved? **(10)**

- Q.3** The following table indicates the data on the number of patients visiting a hospital daily for a period of time. **(10)**

Number of patients	0-10	10-20	20-30	30-40	40-50	50-60
Number of days	10	16	24	20	18	12

Compute the median and mode.

- Q.4** A survey is conducted to study the effectiveness of an advertisement by calling people at random by asking the number of advertisements read or seen in a week (X) and the number of items purchased (Y) in that week **(10)**

X	5	10	4	3	2	7	3	6
Y	10	12	5	2	1	3	4	8

Calculate the Karl Pearson's Coefficient of correlation and comment on the result.

- Q.5** Write short Notes (Any TWO) **(10)**

- Sample, Concept of Sampling, Advantages of Sampling
- Properties of Normal Distribution
- Rank Correlation
- Null and alternate Hypothesis (with examples)

SECTION- II

- Q.6** Marks scored by two students in 5 tests are as follows **(10)**

A	58	61	60	65	66
B	56	87	88	46	43

Find coefficient of variation to conclude

- Who is a better scorer?
- Who is more consistent? Why?

- Q.7** Given the two regression lines, $2Y - X - 50 = 0$ and $3Y - 2X - 10 = 0$ Find **(10)**

- Mean for X and Y
- Predict X when Y = 100
- Predict Y when X = 80

Q.8 The following table gives the frequency distribution of weekly wages of 65 employees of company. **(10)**

Wages (Rs.)	No. of employees
250-260	08
260-270	10
270-280	14
280-290	17
290-300	10
300-310	08
310-320	03

Draw less than and greater than ogive curve and find

- The number of employees earning less than Rs 295 per week.
- The median wages.

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