

MASTER OF BUSINESS ADMINISTRATION (CBCS – 2022 COURSE)
M.B.A. Sem – I : WINTER- 2022
SUBJECT : STATISTICAL TECHNIQUES

Day : Wednesday

Time : 10:00 AM-01:00 PM

Date : 7/12/2022

W-25910-2022

Max. Marks : 100

N.B.

- 1) Attempt **ANY FOUR** questions from Section – I & **ANY TWO** questions from Section – II.
- 2) Figures to the **RIGHT** indicate **FULL** marks.
- 3) Answers to both the sections should be written in the **SAME** answer book.

SECTION – I

Q.1 What is Statistics? Point out its importance in the business. **(15)**

Q.2 Draw Histogram and frequency polygon for the following data; **(15)**

Weight (Kg.)	10-20	20-30	30-40	40-50	50-60	60-70	70-80
No. of students	7	12	28	30	24	18	3

Q.3 The daily expenditure of 100 families is given below: **(15)**

Expenditure in Rs.	20-29	30-39	40-49	50-59	60-69
No. of families.	14	-	27	-	15

If mode of the distribution is 43.5. Find the missing frequencies.

Q.4 A fair coin is tossed thrice. Find the probability of getting **(15)**

- i) no head
- ii) two consecutive heads
- iii) tail on the second toss.

Q.5 In a certain factory, if we found that, the variance of the number of absentees is 4 **(15)**
workers per shift. Find the probability that on a given shift.

- i) exactly 2 workers will be absent
- ii) not more than 2 workers will be absent
- iii) at least 2 workers will be absent.

Q.6 Write short notes on **ANY THREE** of the following: **(15)**

- a) Bar diagrams
- b) Positional averages
- c) Random experiments
- d) Normal distribution.

SECTION – II

Q.7 Calculate Karl Pearson's coefficient of correlation from the following data. Also **(20)**
obtain the two regression equations.

X	62	72	98	76	81	56	76	92	88	49
Y	112	124	131	117	132	96	120	136	97	85

PTO

- Q.8 a)** Calculate mean deviation from median for the following data. Also calculate its coefficient. (10)

Marks	0-10	10-20	20-30	30-40	40-50
Frequency	10	16	30	32	12

- b)** What is Correlation? Explain various types of Correlation with Scatter Diagrams. (10)

- Q.9 a)** Explain various applications of Statistics. (10)

- b)** The data about the sales and advertisement expenditure of a firm is given below. (10)

Particulars	Sales (in crores of Rs.)	Advertisement expenditure (in crores of Rs.)
Means	40	6
Standard Deviations	10	15
Coefficient of correlation $\gamma=0.9$		

- i) Estimate the likely sales for a proposed advertisement expenditure of Rs. 10 crores.
- ii) What should be the advertisement expenditure if the firm proposes a sales target of Rs. 60 crores?
