B. B. A. / BPM SEM. – II (CBCS – 2018 COURSE-REGULAR) /
(: SUMMER – 2022
SUBJECT : BUSINESS STATISTICS

Day : Thursday   Time : 10.00 A.M. To 1.00 P.M.
Date : 30.06.2022   S 18819-2022   Max. Marks: 60

N.B.:

1) Attempt **ANY THREE** questions from Section – I and **ANY TWO** questions from Section – II.
2) Answers to both the sections should be written in **SAME** answer book.
3) Figures to the right indicate **FULL** marks.
4) Use of non-programmable **CALCULATOR** is allowed.

SECTION – I

Q.1 **a)** Define 'Regression Analysis' and Discuss various Business Applications of it. **[06]**

b) Pune Municipal Corporation collected the following amount of tax from **[06]** roaming traders in a busy market:

Amount of Tax (₹)	25	50	75	100	200	300
No. of traders	135	120	90	60	55	40

From the above data of tax collection calculate Quartile Deviation (Q. D).

Q.2 **a)** Find Rank Correlation coefficient between 'x' and 'y' data series: **[06]**

x	12	9	8	10	11	13	7
y	14	8	6	9	11	12	3

b) Define and discuss following terms with respect to theory of probability: **[06]**
    i) Sample space   **ii)** Random experiment

Q.3 **a)** A bag contains 20 tickets marked with numbers 1 to 20, one ticket is drawn at **[06]** random. Find the probability that it will be a multiple of 2 or 5.

b) Differentiate: Correlation and Regression. **[06]**

Q.4 **a)** Explain the concept of 'conditional probability' with the help of suitable **[06]** example.

b) A survey study of 366 students about the performance of matured and fresh **[06]** certificate holder student admitted in the first year of the BBA. The information yielded is N = 366, (A) = 192, (B) = 172, (αβ) = 100.
Where, A denotes matureness and B implies good performance. Find Yule's coefficient (Q).

Q.5 Write short notes on **ANY TWO** of the following: **[12]**
   a) Scatter diagram
   b) Karl Pearson's Correlation coefficient
   c) Measures of Dispersion

P.T.O.

SECTION – II

Q.6 The following data of 60 students depicts internal marks out of 40 **[12]**

36	32	24	17	25	26	26	31	30	14
7	14	12	24	25	17	22	24	28	32
32	22	9	15	18	20	22	22	26	28
11	11	17	8	22	40	38	17	12	19
22	40	21	23	8	9	10	22	22	40
19	22	28	31	33	35	18	7	13	18

Calculate Mean, Mode and Median.

Q.7 Compute two linear regression equations and find blood pressure of the woman **[12]**
whose age is '50'.

Age (x)	56	42	36	47	49	42	60	72	63	55
Blood pressure (y)	147	125	118	128	145	140	155	160	149	150

Q.8 Compute the variance and standard deviation for the following data: **[12]**

Height in inches(x)	58	59	60	61	62	63	64	65	66
No. of students(f)	15	20	32	35	33	22	22	10	8

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