

Total page: 1

**PG (NEW) CBCS**  
**PG Semester-II Examination, 2020**  
**MHA**  
**PAPER: MHA-207**  
**(Quantitative Methods of Management)**

**Full Marks: 20****Time: 1 Hours****Answer any one Question from the followings:****20X1=20**

- 1) Calculate the correlation coefficient for the sample X and Y given by

X	8	10	5	8	9
Y	1	3	1	2	3

- 2) Define correlation coefficient. If  $r$  be the sample correlation coefficient of a bi-variate sample  $(x_1, y_1), (x_2, y_2), \dots, (x_n, y_n)$ , then prove that  $-1 \leq r \leq 1$ .

- 3) The following frequency distribution gives the monthly consumption of electricity of 68 customers of a family. Find the mean, median and mode from the following information.

Monthly consumption	65-85	85-105	105-125	125-145	145-165	165-185	185-205
No. of customers	4	5	13	20	14	8	5

- 4) a) If A and B are two events consequent to random experiment then prove that  $P(A+B) = P(A) + P(B) - P(AB)$
- b) Define i) Classical definition of probability.  
 ii) Conditional probability.

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