

**2018**  
**MBA**  
**MBA : 1.3**  
**QUANTITATIVES TECHNIQUE FOR BUSINESS**  
Full Marks:70  
Time : 3 hours

*The figure in the margin indicates full marks for the questions*

**SECTION A**

All questions are compulsory

2x5

1. "Statistics is all-pervading". Elucidate this statement
2. What are the merits and demerits of standard deviation?
3. Define point estimate.
4. What is regression analysis?
5. What are various elements of decision analysis?

**SECTION B**

Answer any five from the following

4x5

1. Distinguish between qualitative and quantitative data.
2. Determine range and its coefficient in the following series.  
X:10-60 60-120 120-180 180-240 240-300  
F: 3 5 6 3 2

3. Explain the procedure for designing a sampling.
4. The data on price and quantity purchased relating to a commodity for 5 months is given below:

Month:	Jan	Feb	March	April	May
Prices(Rs):	10	10	11	12	12
Quantity(Kg):	5	6	4	3	3

Find the Pearson correlation coefficient between prices and quantity and comment on its sign and magnitude.

5. Describe the steps involved in the process of decision making.

6. Compute sample standard deviation and sample variance for the following data:

X: 50 75 89 110 175 185

F: 11 19 20 21 19 12

7. Explain the three general techniques of assigning probability.

### SECTION C

Answer any five from the following

8x5

1. Calculate the first and third quartiles, inter quartile range and coefficient of quartile deviation.

Class: 0-8 8-16 16-24 24-32 32-40 40-48 48-56 56-64

Frequency: 8 9 10 11 12 7 6 4

2. Determine median from the following series:

Marks: 0-10 10-20 20-30 30-40 40-50 50-60

No.of students: 10 20 30 50 40 30

3. Explain the types of non random sampling techniques.

4. Find the rank correlation from the following data:

X: 92 86 87 86 86 77 71 63 53 50

Y: 86 83 91 77 68 85 52 82 37 57

5. Given the below is the pay off (in Rs.) matrix:

States of nature	Do not expand	Expand 200 units	Expand 400 units
High demand	2500	3500	5000
Medium Demand	2500	3500	2500
Low Demand	2500	1500	2000

Decide the optimal action by using :

a. Laplace criterion

b. Maximin criterion

6. Discuss the term 'graphical presentation of data'.

7. What are the major limitations of Statistics? Explain with suitable examples.

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