

- (b) Discuss the properties of Normal Distribution.

**Unit-IV**

8. Discuss the procedure of hypothesis testing. Elaborate the concepts of :
- (a) Level of significance
- (b) One-tailed and two-tailed tests
9. The following table shows the sales (in lakh Rs.) made by four salesmen in three months.

**Salesman**

Months	A	B	C	D
January	20	25	24	23
February	19	23	20	20
March	21	21	22	20

Can we infer that the mean sales of four salesmen are equal ?

Roll No. ....

**56004**

**M.B.A. 2 Year 1st Semester  
(N.S.) Batch 2011-12**

**Examination-December, 2015**

**Quantitative Analysis**

**Paper-MBA-104**

**Time : 3 hours**

**Max. Marks : 80**

Before answering the questions, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard will be entertained after the examination.

**Note :** Attempt **compulsory** question No. 1 from section-A and **four** questions from section-B, (**one** question from each unit). All questions carry equal marks.

**Section-A**

1. Taking suitable examples, illustrate the following :
- (a) Frequency distribution

- (b) Geometric mean of two numbers
- (c) Co-efficient of determination
- (d) Regression equation of Y on X
- (e) Random experiment
- (f) Binomial distribution
- (g) Type-I error
- (h) Degree of freedom

### Section-B

#### Unit-I

2. Find the values of arithmetic mean, median,  $Q_3$ ,  $D_7$  and mode for the following distribution :

<b>X</b>	0-50	50-100	100-150	150-200	200-250	250-300	300-350
<b>F</b>	18	26	38	52	32	22	12

3. What is the significance of measures of variations ? Discuss the merits, demerits and applications of various measures of variation.

#### Unit-II

4. Highlight the importance of correlation. Does correlation always signify cause and

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effect relationship ? What are the differences between correlation and regression ?

5. Find the trend values, by least square method for the following time series.

<b>Year</b>	1981	1982	1983	1984	1985	1986
<b>Profit (000' Rs.)</b>	57	65	63	72	69	78

<b>Year</b>	1987	1988	1989	1990	1991	1992
<b>Profit (000' Rs.)</b>	81	82	90	92	95	97

#### Unit-III

6. In a bolt manufacturing factory, machines A, B and C produce 25%, 35% and 40% of the total output respectively. Defectives produced by A are 5%, by B are 4% and by C are 2%. A bolt is drawn and found to be defective. Find the probability that it was produced on A, B or C.

7. (a) Discuss the different approaches to probability. What are their advantages and limitations ?

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(3)

[ Turn Over