

Roll No. ....

**56004**

**MBA 2 Yr. 1st Sem.(N.S.) Batch 2011-13**

**Examination – December, 2012**

**QUANTITATIVE ANALYSIS**

**Paper : MBA-104**

**Time : Three hours ]**

**[ Maximum 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 examination.*

**Note :** Section - A is **compulsory**. Attempt **one** question from each **Unit** in Section - B. All questions carry equal marks.

**SECTION – A**

1. (a) Can the values of mean, mode and median be the same? If yes, state the situation.
- (b) What is scatter diagram and how is it useful in the study of correlation?
- (c) What do you mean by Central -Tendency?
- (d) What is skewness? How is it measured?
- (e) What is Spearman's Rank Correlation Coefficient? Discuss its utility.
- (f) Comment: "Poisson is a limiting form of Binomial distribution".

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- (g) Comment: "Statistics is a body of methods for making wise decision in the face of uncertainty."  
 (h) "A correlation coefficient  $r = 0.8$  indicates a relationship twice as close to  $r = 0.4$ " Comment.

**SECTION – B**  
**UNIT – I**

2. (a) Find the missing frequencies if the value of median is 30.5 and  $N = 120$ .

Group:	20-25	25-30	30-35	35-40	40-45	45-50	50-55	55-60
Frequency:	8	15	58	?	22	?	4	2

- (b) A motorist took 12 hours to travel from place A to place B, which are situated 300 kms apart. On the return journey he took 15 hours to cover this distance. What is the average speed of the motorist?

3. (a) Share prices of two companies A Ltd. and B Ltd. were recorded as follows :

A Ltd.	B Ltd.
12	113
13	114
15	113
14	115
14	117
14	114
13	112
17	114

Which company's share prices are more variable?

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(b) Calculate the mode of the following data :

<u>WEIGHTS (lbs)</u>	<u>NUMBER OF STUDENTS</u>
below 100	4
below 110	6
below 120	24
below 130	46
below 140	67
below 150	86
below 160	96
below 170	99
below 840	100

### UNIT - II

4. Marks secured by eleven students in two subjects are given below :

Subject A : 71 66 68 67 71 70 73 70 72 66 65

Subject B : 69 65 64 63 62 65 64 65 66 62 59

Calculate Karl Person's co-efficient of correlation amongst the marks of two subjects.

5. Fit a straight line trend to the following data and estimate the likely profit for the year 2003. Also calculate the various trend values.

Year : 1995 1996 1997 1998 1999 2000 2001

Profit (in lacs) : 60 72 75 65 80 85 95

### UNIT - III

6. (a) State and prove the theorems of probability.

(b) Find the probability of getting a sum of 10 if we throw two dice.

7. The following is the distribution of the daily number power failures reported in a western city on 300 days :

Number of Power Failures : 0 1 2 3 4 5 6 7 8 9

Number of Days : 9 43 64 62 42 36 22 14 6 2

Test the goodness of fit of Poisson distribution at .05 level.

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P. T. O.

## UNIT – IV

8. The following table gives the number of refrigerators sold by 4 salesmen in three months May, June and July :

month	Salesman			
	A	B	C	D
May	50	40	48	39
June	46	48	50	45
July	39	44	40	39

Is there a significant difference in the sales made by the four salesmen ? Is there a significant difference in the sales made during different months ?

9. Two hundred randomly selected adults were asked whether TV shows as a whole are primarily entertaining, educational or a waste of time (only one answer could be chosen). The respondents were categorized by gender. Their responses are given in the following table.

Gender	Opinion		
	entertaining	educational	waste of time
female	52	28	30
male	28	12	50

Is this evidence convincing that there is a relationship between gender and opinion ?