MBA (Fifth Year) Examination, 2018

(Semester-II)

STATISTICS FOR BUSINESS DECISION

[IMS-526]

Time : Three Hours]   [Maximum Marks : 70

Note : Answer **five** questions in all. Question **no. 1** is **compulsory** .Besides this, attempt **one** question from each unit. Use of simple calculator is allowed.

1.   Write short notes on the following :   [3x10=30]

(a)   Explain the meaning of "Statistics as data" giving a proper definition of statistics.

(b)   Discuss the features and uses of Median.

(c)   Distinguish between population and sample.

(d)   Does the correlation always signify cause and effect relationship between two variables ? Discuss.

(e)   Describe the significance of "Time Series" in business decisions.

7.   Determine the trend values from the following data by least squares method :   [10]

Year	Sales (In Rs. lakh)
1995	40
1996	45
1997	46
1998	41
1999	48
2000	49
2001	46

UNIT-IV

8.   Define probability and explain the addition and multiplication theorem of probability alongwith their applications.   [10]

9.   A manufacturer of steel blades declares that 5% of the blades manufactured by him are defective. He sells blades in packets each containing 5 blades. Find the probability of a packet containing :

(a)   No defective blade

(b)   One defective blade   [10]

----- x -----

(f) What are mutually exclusive events ? How is probability of an event computed in case of these types of events ?

(g) A bag contains 5 white and 8 black balls. Two balls are drawn randomly from the bag. What is the probability that one ball is black and other is white ?

(h) If the proportion of delay in the departure of an aircraft is 0.4, what is the probability that 4 out of the 10 aircrafts are delayed.

(i) Compute Mode for the following data :

Marks(Less than)	10	20	30	40	50	60	70
No. of Students	7	18	27	42	54	60	68

(j) The average marks secured by 50 students was 44. Later on it was discovered that a score of 40 was misread as 60. Find the correct average marks.

UNIT-I

2. "Statistics is not a Science, it is a scientific method." Critically explain and discuss the scope and limitations of statistics. [10]

3. Compute Mean and Median for the following frequency distribution: [10]

Marks(Less than)	10	20	30	40	50	60	70	80
No. of Students	5	14	27	52	63	70	73	75

UNIT-II

4. Calculate quartile deviation and its coefficient from the following data : [10]

Size	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80
Frequency	3	9	12	20	8	6	6	6

5. Compute Karl Pearson's Co-efficient of correlation for the following series : [10]

X	64	65	66	67	68	69	70
Y	66	67	65	68	70	68	72

UNIT-III

6. You are given the following information relating to marks in Statistics and Economics obtained by 450 students in an examination :

	Statistics	Economics
Mean marks	40	48
Standard Deviation	12	16

Correlation coefficient = 04.87. Give the equations to the two lines of regression and estimate the average marks in Economics of the candidate who obtained 55 marks in Statistics. [10]