



K.R. MANGALAM UNIVERSITY

THE COMPLETE WORLD OF EDUCATION

Roll no.....

End Semester Examination, December 2024
MBA (DM & IBM) SEMESTER III
STATISTICS OF BUSINESS (MCBA703)

Time: 2.5 hrs.

Max Marks: **50**

Note: *All Questions are compulsory. Marks are indicated against each question.*

PART-A

Q.1 *Attempt any Five Questions.*

- (a) The mean score obtained in an examination by a group of 100 students was found to be 50. The scores obtained in the same examination by another group of 200 students was 57. Find the mean of scores obtained by both the groups taken together. [CO-1] [L-3] **2**
- (b) What is the purpose of Variance? [CO-2] [L-1] **2**
- (c) What is the difference between Correlation and Regression? [CO-3] [L-1] **2**
- (d) What is the relation between Standard Deviation and Mean? [CO-4] [L-1] **2**
- (e) Explain the role of Moving average in Share market. [CO-1] [L-1] **2**
- (f) What are the limitations of statistics? [CO-5] [L-2] **2**
- (g) What is a time-series analysis, and how can it be used to forecast sales or demand? [CO-3] [L-1] **2**

2x5

PART-B

Q.2

Calculate the standard deviation, coefficient of variation and variance from the following information

Size	12	13	14	15	16	17	18	20
Frequency	4	11	32	21	15	8	5	4

[CO-2] [L-3] **10**

OR

A. What do you mean by correlation? Mention any four uses of it?

B. The mean and standard deviation of a set of 100 observations were worked out as 40 and 5 respectively by a computer which by mistake took value 50 in place of 40 for one observation. Find the correct mean and standard deviation

[CO-2] [L-3] **10**

Q.3 From the prices of X & Y of shares A& B respectively given below, state which share is more stable in value.

Price of Share A 55 54 52 53 56 58 52 50 51 49

Price of share B 108 107 105 105 106 107 104 103 104 101

[CO-3] [L-4] 10

OR

Fit a straight-line trend by the method of least squares and estimate the arrival in the year 2013, for the data indicated in the table below

Year 2003 2004 2005 2006 2007 2008 2009

Tourists arrivals 18 20 23 25 24 28 30

[CO-3] [L-4] 10

Q.4 From the following data obtain the two regression equations.

Sales 91 97 108 121 67 124 51 73 111 57

Purchase 71 75 69 97 70 91 39 61 80 47

[CO-4] [L-4] 10

OR

From the following data calculate Price Index Number under simple aggregate method for the year 1996 using 1995 as base year

Commodities	Price in 1995(Rs)	Price in 1996 (Rs)
Rice	10	14
Wheat	8	10
Sugar	42	63
Coconut Oil	10	15

[CO- 4] [L-4] 10

Q.5 The following data related to the scores obtained 9 salesmen of a company in an intelligence test and their weekly sales in Rs ('ooo).

Salesman A B C D E F G H I

Test scores 50 60 50 60 80 50 80 40 70

Weekly sales 30 60 40 50 60 30 70 50 60

(i) Obtain the regression equation of sales on intelligence test scores of the salesman.

(ii) If the intelligence test score of a salesman is 65, what would be his expected weekly sales?

[CO-5] [L-3] 10

OR

Mysuru Mahanagar Palike surveyed the travel preferences of people who travelled to work by train or bus. The initial analysis suggested that 1 in 5 people travelled by train to work. If 5 people are interviewed, what is the probability that, i) Exactly 3 prefer travelling by train ii) Three or more prefer travelling by train and iii) Less than 3 prefer travelling by train. [CO- 5] [L-3] 10