

21MBA1C5L

MBA I Semester (NEP) Degree Examination, June - 2023
MANAGEMENT

Quantitative Techniques for Managers

Time : 3 Hours

Maximum Marks : 70

Note : Answer **any five** questions out of the following questions. **Q1** is **Compulsory**. Each question carries **equal** marks.

1. (a) What are various ways to present data to convey the meaning ? Explain in brief. **7**
 (b) Calculate standard deviation for the following data : **7**

Class Interval	0-10	10-20	20-30	30-40	40-50
Frequency	5	8	15	16	6

2. (a) Write a note on various types of interpretations from scatter diagrams. **7**
 (b) Find the correlation coefficient between advertisement expenditure and profit for the following data : **7**

Adv. Expenditure	30	44	45	43	34	44
Profits	56	55	60	64	62	63

3. Consider the following time series **14**

T	1	2	3	4	5	6	7
Y_t	120	110	100	96	94	92	88

- (a) Construct a time series plot. What type of pattern exists in the data ?
 (b) Develop the linear trend equation for this time series.
 (c) What is the forecast for $t = 8$?
4. (a) Write a brief note on normal distribution. **7**
 (b) The chances of catching cold by workers working in an ice factory during winter are 25% . What is the probability that out of 5 workers 4 or more will catch cold ? **7**

5. (a) Discuss in detail scope of data analytics. **7**
(b) Write a note on dashboards and reporting. **7**

6. Marks of 6 students of a class in paper I and paper II of Statistics are given below : **14**

Paper I	45	55	66	75	85	100
Paper II	56	55	45	65	62	71

Find

- (i) Both regression coefficients,
(ii) Both regression lines, and
(iii) Correlation coefficient
7. (a) Write a brief note on data warehousing. **7**
(b) Write a brief note on Bayes' Theorem. **7**
8. Write a note on following :
(a) Seasonal Variations **5**
(b) Median **5**
(c) Moving Averages **4**

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