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MS-08

MANAGEMENT PROGRAMME

(MP)

Term-End Examination

December, 2022

MS–08 : QUANTITATIVE ANALYSIS FOR MANAGERIAL APPLICATIONS

Time : 3 Hours *Maximum Marks : 100*

Note : *(i) Section A has six questions, each carrying 15 marks. Attempt any* ***four*** *questions from this Section.*

(ii) Section B is compulsory and carries 40 marks. Attempt both questions.

(iii) Use of calculator is permissible.

Section—A

1. What do you understand by the term 'Statistics' ? Explain various statistical techniques which

can be helpful for a decision maker in solving problems.

2. Calculate the median from the following data :

Marks (less than)	No. of Students
80	100
70	90
60	80
50	60
40	32
30	20
20	13
10	5

3. The customer accounts of a certain departmental stores have an average balance of ` 120 and a standard deviation of ` 40. Assuming the account balances are normally distributed :

   (i) What proportion of the accounts is over ` 150 ?

(ii) What proportion of the accounts is between ` 100 and ` 150 ?

Given :

Probability ($0 \leq z \leq 0.5$) is 0.1915

Probability ($0 \leq z \leq 0.75$) is 0.2734

4. What is 'sampling' ? List the various reasons that make sampling so attractive in drawing conclusions about the population.

5. Find the coefficient of correlation between X and Y from the following data :

X	Y
1	12
2	11
3	13
4	15
5	14
6	17
7	16
8	19
9	18

6. Write short notes on any *three* of the following :

   (a) Sources of secondary data

   (b) Binomial distribution

   (c) Hypothesis

   (d) The correlation coefficient

   (e) Least square criterion

Section—B

7. A purchase manager knows that the hardness of castings from any supplier is normally distributed with a mean of 20.25 and S. D. of 2.5. He picks up 100 samples of castings from a supplier who claims that his castings have higher hardness and finds the mean hardness as 20.50. Test whether the claim of the supplier is tenable. (The tabulated value of test statistics is 1.645).

8. What do you understand by measures of variation ? Discuss the significance of measuring variation. Also, describe the properties of a good measure of variation.