

No. of Printed Pages : 4

**MMPC-015**

**MANAGEMENT PROGRAMME**

**(MP)**

**Term-End Examination**

**June, 2025**

**MMPC-015 : RESEARCH METHODOLOGY FOR  
MANAGEMENT DECISIONS**

*Time : 3 Hours*

*Maximum Marks : 100*

*Weightage : 70%*

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**Note :** (i) *This question paper contains two  
Sections : Section A and Section B.*

(ii) *Attempt any **four** questions from  
Section A. Each question carries  
20 marks.*

(iii) *Section B is compulsory and carries  
20 marks.*

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**A-175/MMPC-015**

**P. T. O.**

**Section—A**

1. What is research methodology ? Give a brief account of mathematical tools for the analysis in research methodology.
2. “A research scholar has to work as a judge and derive the truth and not as a pleader who is only eager to prove his case in favour of his plaintiff.” Discuss the statement, pointing out the objectives of the research.
3. Explain random sampling and outline the different methods of random sampling.
4. “A questionnaire is the most popular method of data collection.” Do you agree ? Justify your answer and explain the guidelines for using this method.
5. What kind of questions will arise while reviewing the draft report before submission ? Elaborate.

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

- (a) Pilot study
- (b) Non-random sampling
- (c) Questionnaire method
- (d) Secondary data
- (e) Research design

### Section—B

7. The data given below is on a large industrial plant's daily emission of Sulphur oxides (in tons) :

|    |    |    |    |    |    |    |    |    |    |
|----|----|----|----|----|----|----|----|----|----|
| 17 | 15 | 20 | 29 | 19 | 18 | 22 | 25 | 27 | 9  |
| 24 | 20 | 17 | 6  | 24 | 14 | 15 | 23 | 24 | 26 |
| 19 | 23 | 28 | 19 | 16 | 22 | 24 | 17 | 20 | 13 |
| 19 | 10 | 23 | 18 | 31 | 13 | 20 | 17 | 24 | 14 |

Use the one-sample sign test to test the null hypothesis that the plant's true average

daily emission of sulphur oxide is  $\mu = 23.5$  tons against the alternative hypothesis  $\mu < 23.5$  tons at the 0.05 level of significance. Tabulated value of test statistic at 0.05 is 1.96.

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