Mathematics

Practice Test Paper 4

(Chapter 13: Statistics)

Class X | 2026–27

Time Allowed: 45 Minutes | Maximum Marks: 25

General Instructions

1. All 13 questions are compulsory. The paper has four sections: A, B, C and D.
2. Section A - 5 marks; Section B - 8 marks; Section C - 9 marks; Section D - 3 marks.
3. Choose one correct option in Section A. Show the necessary steps and reasoning in Sections B, C and D.
4. Round non-terminating answers to two decimal places. Use of calculators is not allowed.

SECTION A

(5 questions × 1 mark = 5 marks)

1. If every frequency is multiplied by 3, the grouped mean:

(A) Remains unchanged (B) Increases by 3

(C) Triples (D) Is divided by 3

2. Using the empirical relation, mean = 14 and mode = 11 give an estimated median of:

(A) 15 (B) 12

(C) 13 (D) 14

3. For observations recorded to the nearest whole number, the continuous boundaries of 40–49 are:

(A) 40.5–49.5 (B) 40–50

(C) 39–49 (D) 39.5–49.5

4. For the grouped scores, the cumulative frequency before the class 20–30 is:

Score	0–10	10–20	20–30	30–40
Frequency	6	8	15	5

(A) 8 (B) 14

(C) 29 (D) 6

5. The class with the greatest frequency in this table has upper limit:

Class interval	5–15	15–25	25–35	35–45
Frequency	7	17	11	5

(A) 25 (B) 35

(C) 45 (D) 15

SECTION B

(4 questions × 2 marks = 8 marks)

6. The grouped mean is 28, the assumed mean is 25, and the total frequency is 40. Find Σfd.

7. Calculate the mean of this frequency distribution.

Class interval	3–5	5–7	7–9	9–11	11–13
Frequency	5	10	10	7	8

8. The total frequency is 50. Find p and the cumulative frequency below 30.

Class	0–10	10–20	20–30	30–40
Frequency	8	12	p	9

9. Identify the median class and state l, f, cf and h for using the median formula.

Class interval	10–20	20–30	30–40	40–50
Frequency	5	9	16	10

SECTION C

(3 questions × 3 marks = 9 marks)

10. The class widths in this waiting-time distribution are unequal. Find the mean using class marks.

Time (min)	0–5	5–10	10–20	20–30	30–50
Frequency	4	6	12	5	3

11. The median is 28.5 and the total frequency is 60. Find x and y.

Class	Frequency
0–10	5
10–20	x
20–30	20
30–40	15
40–50	y
50–60	5

12. Estimate the modal daily water consumption from the table.

Water (litres)	100–150	150–200	200–250	250–300	300–350
Frequency	5	11	20	13	6

SECTION D

(Application Based Question - 3 marks)

13. A shop recorded customer spending in one hour. Use the grouped data to answer the following.

Spend (Rs)	0–50	50–100	100–150	150–200
Frequency	6	12	8	4

(i) Find the total number of observations.

(ii) State the modal class.

(iii) Find the grouped mean.