Mathematics

Practice Test Paper 7

(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. For the table below, the value of N/2 used to locate the median class is:

Class interval	0–10	10–20	20–30	30–40	40–50
Frequency	4	7	16	8	5

(A) 20 (B) 25

(C) 15 (D) 18

2. In the mode formula for this distribution, the succeeding frequency f_2 is:

Class interval	0–5	5–10	10–15	15–20	20–25
Frequency	6	10	19	12	4

(A) 6 (B) 10

(C) 19 (D) 12

3. For x = 18 and a = 24, the deviation d = x − a is:

(A) 42 (B) −6

(C) 6 (D) 18

4. In computing a grouped mean, each class is represented by its:

(A) Lower limit only (B) Upper limit only

(C) Class mark (D) Frequency

5. If the mean is 32 and the estimated mode is 26, the empirical relation gives a median of:

(A) 31 (B) 28

(C) 29 (D) 30

SECTION B

(4 questions × 2 marks = 8 marks)

6. Using the table, find the percentage of students who scored at least 20 but below 40.

Marks	0–10	10–20	20–30	30–40
Frequency	5	7	18	10

7. A grouped distribution has median 42, l = 40, h = 10, f = 20 and N = 60. Find the cumulative frequency cf before the median class.

8. Calculate the grouped mean for this distribution with unequal class widths.

Class interval	0–4	4–10	10–20
Frequency	5	8	7

9. The table records 54 readings. Find p and the cumulative frequency below 60.

Class	0–20	20–40	40–60	60–80
Frequency	9	14	p	11

SECTION C

(3 questions × 3 marks = 9 marks)

10. The table lists weekly savings. Find the mean by the step-deviation method.

Savings (Rs)	1000–1200	1200–1400	1400–1600	1600–1800	1800–2000
Frequency	3	7	12	6	2

11. The more-than-type table gives parcel masses. All masses are below 7 kg. Convert it to an ordinary frequency distribution and find the median.

Mass (kg)	Cumulative frequency
At least 2	40
At least 3	35
At least 4	26
At least 5	11
At least 6	3
At least 7	0

12. Find the mean and mode of the distribution below. Which is larger?

Marks	0–10	10–20	20–30	30–40
Frequency	3	9	12	6

SECTION D

(Application Based Question - 3 marks)

13. A fruit seller grouped the masses of small fruit packs. Use the grouped data to answer the following.

Mass (g)	100–120	120–140	140–160	160–180
Frequency	2	8	14	6

(i) Find the total number of observations.

(ii) State the modal class.

(iii) Find the grouped mean.