Mathematics

Practice Test Paper 6

(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. The class mark of 45–60 is:

(A) 57.5 (B) 50

(C) 52.5 (D) 55

2. Which cumulative frequency is correct for values below 15?

Class interval	0–5	5–10	10–15	15–20
Frequency	7	9	9	6

(A) 25 (B) 31

(C) 7 (D) 16

3. What is the frequency in the interval 20–30?

Class interval	Cumulative frequency
Less than 10	5
Less than 20	16
Less than 30	29
Less than 40	40

(A) 18 (B) 29

(C) 11 (D) 13

4. With a = 50, $\Sigma fd = -60$ and $\Sigma f = 20$, the mean is:

(A) 60 (B) 47

(C) 50 (D) 53

5. For a distribution with a unique modal class and equal class widths, the modal class is selected using:

(A) The highest frequency

(B) The total frequency

(C) The smallest class mark

(D) The lowest frequency

SECTION B

(4 questions × 2 marks = 8 marks)

6. The total frequency is 42. Find p and the frequency of observations at least 15.

Class	0–5	5–10	10–15	15–20
Frequency	6	12	p	8

7. The values were recorded to the nearest unit. Write the continuous boundaries and class marks for all three classes.

Class	Frequency
30–39	4
40–49	9
50–59	7

8. Why is the mean calculated from grouped class marks usually an estimate rather than the exact mean of the original observations?

9. Find the estimated modal test score.

Score	0–10	10–20	20–30	30–40	40–50
Frequency	3	8	15	9	5

SECTION C

(3 questions × 3 marks = 9 marks)

10. The grouped mean is 52.25. Find the missing frequency k.

Class interval	0–20	20–40	40–60	60–80	80–100
Frequency	12	k	32	15	13

11. The table records sizes of manufactured items. Estimate the mode.

Size (cm)	Frequency
0–4	5
4–8	7
8–12	9
12–16	17
16–20	12
20–24	10
24–28	6

12. The cumulative heights of 51 girls are given. The first group has heights from 135 cm to below 140 cm. Find the median height.

Height (cm)	Cumulative frequency
Less than 140	4
Less than 145	11
Less than 150	29
Less than 155	40
Less than 160	46
Less than 165	51

SECTION D

(Application Based Question - 3 marks)

13. A community centre recorded exercise times. Use the grouped data to answer the following.

Time (min)	10–20	20–30	30–40	40–50
Frequency	3	11	10	6

(i) Find the total frequency.

(ii) Find the number in the highest class.

(iii) Estimate the mode.