Mathematics

Practice Test Paper 5

(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 median divides a distribution into:

(A) Classes of equal frequency

(B) Two approximately equal-frequency parts

(C) Two equal-width classes

(D) Three equal parts

2. Which method uses the coded values $u = (x - a)/h$?

(A) Median method

(B) Mode method

(C) Direct method

(D) Step-deviation method

3. The frequency of the modal class in the table is:

Class interval	0–5	5–10	10–15	15–20	20–25
Frequency	4	12	18	9	5

(A) 5 (B) 12

(C) 18 (D) 9

4. How many observations are at least 20 but below 40?

Class interval	0–10	10–20	20–30	30–40	40–50
Frequency	3	7	13	11	6

(A) 24 (B) 26

(C) 19 (D) 21

5. If $\Sigma fx = 840$ and $\Sigma f = 40$, the mean is:

(A) 22 (B) 24

(C) 20 (D) 21

SECTION B

(4 questions × 2 marks = 8 marks)

6. Find the median mass of these packages.

Mass (g)	40–50	50–60	60–70	70–80
Frequency	5	12	9	4

7. The table records 48 customers. Find k and the number spending less than Rs 100.

Spend (Rs)	0–50	50–100	100–150	150–200
Customers	7	13	k	10

8. The mean of the distribution is 17. Find p.

Class interval	0–10	10–20	20–30
Frequency	2	4	p

9. For the modal class, $l = 30$, $h = 10$, $f_1 = 18$, $f_0 = 10$ and $f_2 = 14$. Calculate the mode.

SECTION C

(3 questions × 3 marks = 9 marks)

10. Calculate the mean daily food expenditure of the 25 households, using a suitable method.

Food cost (Rs)	100–150	150–200	200–250	250–300	300–350
Frequency	4	5	12	2	2

11. Find the median weight of these 30 students.

Weight (kg)	Frequency
40–45	2
45–50	3
50–55	8
55–60	6
60–65	6
65–70	3
70–75	2

12. The mode of this distribution is 24. Find the missing frequency p.

Class	Frequency
0–10	4
10–20	8
20–30	20
30–40	p
40–50	3

SECTION D

(Application Based Question - 3 marks)

13. A school recorded pupils' travel distances. Use the grouped data to answer the following.

Distance (km)	0–2	2–4	4–6	6–8
Frequency	4	8	12	6

(i) Find the cumulative frequency below 4.

(ii) Identify the median class.

(iii) State the class mark of the median class.