RK VISION ACADEMY

NEET | IIT – JEE | FOUNDATION

CBSE PRACTICE PAPER(2024)

(Mathematics)

Grade : X   **Marks: 40**
marks
Chapter: Statistics   SET-2   **Time: 90**
minutes

SECTION A

(This section comprises of Multiple-choice questions (MCQ) of 1 mark each.)

1. The upper limit of the modal class from the given distribution.

Height [in cm]	Below 140	Below 145	Below 150	Below 155	Below 160	Below 165
Number of girls	4	11	29	40	46	51

   (a) 165   (b) 160   (c) 155   (d) 150

2. The median of the first 10 prime numbers is

   (a) 12   (b) 10   (c) 24   (d) None of these

3. The mean and median of a distribution are 14 and 15, respectively. The value of mode is
   (a) 16   (b) 17   (c) 13   (d) 18

4. Suppose mean of 10 observations is 20, if we add 5 in each observation, then the new mean is
   (a) 25   (b) 10   (c) 20   (d) 5

5. Which of the following is a measure of central tendency?
   (a) Frequency   (b) Cumulative frequency   (c) Mean   (d) Class-limit

6. Construction of a cumulative frequency table is useful in determining the
   (A) mean   (B) median   (C) mode   (D) all the above three measures

7. In the formula $x = a + \dfrac{f_i d_i}{f_i}$, for finding the mean of grouped data di's are deviations from a of
   (A) lower limits of the classes   (B) upper limits of the classes   (C) mid points of the classes   (D) frequencies of the class marks

8. While computing mean of grouped data, we assume that the frequencies are
   (A) evenly distributed over all the classes   (B) centred at the class marks of the classes   (C) centred at the upper limits of the classes   (D) centred at the lower limits of the classes

9. Look at the following table:

Classinterval	Classmark
0 – 5	A
5 – 10	B
10 – 15	12.5
15 – 20	17.5

The value of A & B, respectively, are:

a. 3,8   b. 2,7   c. 3,7   d. 2.5, 7.5

10

x_i	f_i	$f_i x_i$
4	10	A—........
8	11	B—........
12	9	C—........
16	13	D—........
		$\sum f_i x_i =$..........

Find the value of $\sum f_i x_i$

a. 208   b. 444   c. 88   d. 40

SECTION B
(This section comprises of very short answer type-questions (VSA) of 2 marks each)

11   In a continuous frequency distribution, the median of the data is 21. If each observation is increased by 5, then find the new median.

12   Consider the following distribution, find the frequency of class 30-40.

Marks obtained	No. of Students
0 or more	63
10 or more	58
20 or more	55
30 or more	51
40 or more	48
50 or more	42

13   Find the mode of the following frequency distribution:

Class	Frequency
0–10	8
10–20	12
20–30	10
30–40	11
40–50	9

SECTION C
(This section comprises of short answer type questions (SA) of 3 marks each)

14. The length of 40 leaves of a plant are measured correct to nearest millimetre and the data obtained is represented in the following table.

Length [in mm]	Number of leaves
118-126	3
127-135	5
136-144	9
145-153	12
154-162	5

15. Find the missing frequencies f_1 and f_2 in the following frequency distribution table, if N = 100 and median is 32.

Marks obtained	0-10	10-20	20-30	30-40	40-50	50-60	Total
Number of students	10	f_1	25	30	f_2	10	100

16. The table below shows the salaries of 280 persons.

Salary (in ₹ thousand)	Number of persons
5-10	49
10-15	133
15-20	63
20-25	15
25-30	6
30-35	7
35-40	4
40-45	2
45-50	1

LearnCBSE.in

Calculate
(i) median of the data.
(ii) mode of the data.

SECTION D
(This section comprises of long answer-type questions (LA) of 5 marks each)

17. The median of the following data is 50. Find the values of 'p' and 'q', if the sum of all frequencies is 90. Also, find the mode.

Marks obtained6	Number of students
20-30	P
30-40	15
40-50	25

50-60	20
60-70	Q
70-80	8
80-90	10

18 The weights (in kg) of 50 wrestlers are recorded in the following table.

Weight (in kg)	Number of wrestlers
100-110	4
110-120	14
120-130	21
130-140	8
140-150	3

Find the mean weight of the wrestlers

19 If mode of the following series is 54, then find the value of f.

Class interval	0-15	15-30	30-45	45-60	60-75	75-90
Frequency	3	5	F	16	12	7

Find the modal class in which the given mode lies and find the value of f.