INDIAN SCHOOL AL WADI AL KABIR

Class IX, Mathematics

Worksheet – STATISTICS (2025-26)

Questions of 1 mark each

Q.1. The class mark of the class 100 – 120 is:

A	110	B	100	C	120	D	220

Q.2. Two consecutive class marks of a distribution are 30 and 36, then the class size is:

A	10	B	8	C	6	D	3

Q.3. In a frequency distribution table, the class interval 160 – 170 has a frequency 22. Then the point on the frequency polygon corresponding to this is_____.

A	(160,22)	B	(165,22)	C	(170,22)	D	(175,22)

Q.4. 1000 families with two children were selected randomly and following data was recorded as follows:

Number of boys in a family	0	1	2
Number of families	200	527	275

If a family is chosen at random, the probability that it has 2 girls is_____.

A	0.527	**B**	$\frac{11}{40}$	**C**	$\frac{29}{40}$	**D**	$\frac{1}{5}$

Q.5. The mode of the data 14, 25, 14, 28, 18, 17, 18, 14, 23, 22, 14, 18 is_____.

A	14	**B**	18	**C**	22	**D**	28

Q.6. The adjusted frequency of the class interval 250–280 is 12. If the minimum class size is 10, then the initial frequency of this class interval was _____.

A	30	B	36	C	66	D	26

Q.7. The marks obtained by 15 students in a science test (out of 100) are:
94, 87, 73, 65, 88, 91, 79, 100, 96, 84, 67, 58, 62, 70, 89. The range of the data is:

A	5	B	40	C	42	D	50

Q.8. The class marks of the frequency distribution are 15, 25, 35, 45, ...Then the class representing the class mark 25 is:

A	20-40	B	15-25	C	25-35	D	20-30

Q.9. If the arithmetic mean of 5,7, 9, x is 9 then the value of x is:

A	11	B	15	C	18	D	16

ASSERTION AND REASONING

DIRECTION: A statement of Assertion (A) is followed by a statement of Reason (R).

Choose the correct option.

(a) Both Assertion (A) and Reason (R) are true and Reason (R) is the correct explanation of Assertion (A).

(b) Both Assertion (A) and Reason (R) are true and Reason (R) is not the correct explanation of Assertion (A).

(c) Assertion (A) is true but Reason (R) is false.

(d) Assertion (A) is false but Reason (R) is true.

Q.10. Assertion: The class interval corresponding to the class mark 55 with class width 10 is 50–60.

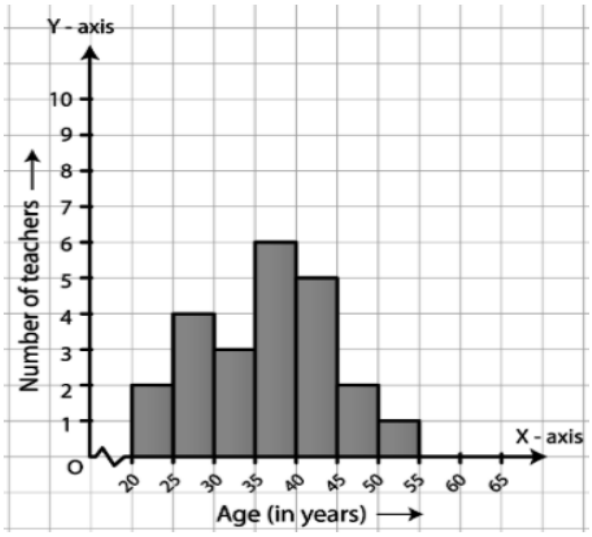
Reason: The lower limit of a class interval is always equal to the class mark.

Questions of 2 marks each

Q.11. The following histogram shows the frequency distribution of the ages of 22 teachers in a school:

(i) What is the sum of the number of youngest and eldest teachers in the school?.

(ii) Which age group teachers are more in the school and which least?



Q.12. Bulbs are packed in cartons, each containing 40 bulbs. 700 cartons were examined for defective bulbs and the results are given in the following table:

Number of defective bulbs	0	1	2	3	4	5	6	More than 6
Frequency (No. of cartons)	371	162	55	49	41	15	5	2

One carton is selected at random. What is the probability that it has
(i) defective bulbs less than 4?
(ii) defective bulbs 6 or more?

Questions of 3 marks each

Q.13. The following data gives the no. of students of Mumbai state who went abroad for study during recent years-

Year Range	2019 – 2020	2020 – 2021	2021 – 2022	2022 – 2023	2023 – 2024
No. of students	1200	800	1400	1800	2200

Represent the above data by a histogram.

Q.14. The maximum temperatures (in degree Celsius) reported in a city for the month of April by the Meteorological Department, are given below:

27.4, 28.3, 23.9, 23.6, 25.4, 27.5, 28.1, 30.5, 29.7, 30.6, 28.4, 31.7, 32.2, 32.6, 33.4, 35.7, 36.1, 37.2, 38.4, 40.1, 40.2, 40.5, 41.1, 42.0, 42.1, 42.3, 42.4, 42.9, 43.1, 43.2

Construct a continuous grouped frequency distribution table.

Q.15. A company surveyed 55 employees about the time they take to commute to work. The results are grouped as follows:

Commute Time (in minutes)	0-10	10-20	20-30	30-40	40-50	50-60
Number of Employees	5	16	10	4	12	8

Construct a frequency polygon to represent the above data.

Questions of 5 marks each

Q.16. The daily wages of 50 workers in a factory are given below:

Age (in years)	No. of persons
0 - 4	3
4 - 8	6
8 - 12	8
12 - 16	10
16 - 20	8
20 - 24	5
24 - 28	3

Draw a histogram and the frequency polygon for the above data.

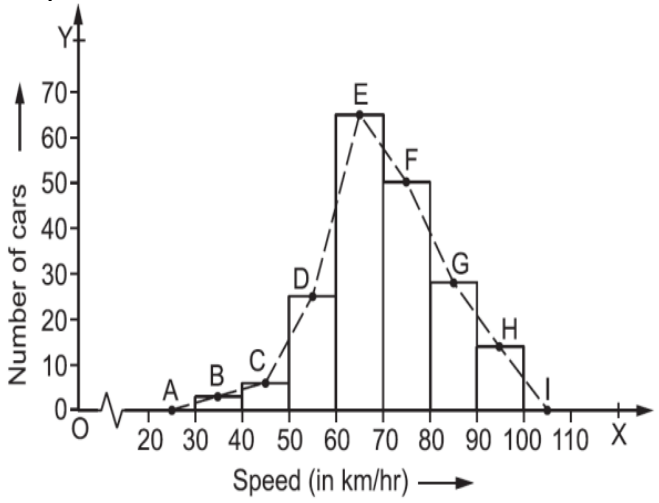
Q.17. Draw a histogram to represent the following data:

Class interval	10–14	14–20	20–32	32–52	52–80
Frequency	5	6	9	25	21

Case study-based (4 marks)

In order to monitor and reduce reckless driving on Delhi roads, authorities have taken proactive measures by installing advanced speed-monitoring cameras at strategic locations prone to over speeding. These cameras aim to enhance road safety and ensure compliance with traffic regulations. Below is a frequency polygon representing the speeds of cars observed passing through a specific monitoring spot on a particular day in Delhi. This data representation provides insights into driving patterns and helps identify areas where enforcement or awareness campaigns may be required.

Speed (in km/h)	Number of cars
20 – 30	0
30 – 40	3
40 – 50	6
50 – 60	25
60 – 70	65
70 – 80	50
80 – 90	28
90 – 100	14
100 – 110	0



Q.18. What is the class size of the given class intervals?

Q.19. Which speed range recorded the highest number of cars?

Q.20. If authorities define "over-speeding" as driving above 80 km/h, how many cars were found to be over-speeding?

Q.21. Calculate the total number of cars observed.

Q.22. In the frequency polygon, which point corresponds to the least frequency above zero, and what are its coordinates (class mark, frequency)?