

CLASS X – MATHEMATICS – CHAPTER 13 STATISTICS

Name: _____

Date: _____

Q01. If $\sum f_i = 15$, $\sum f_i x_i = 3P + 36$ and mean of any distribution is 3, then $p =$

- (a) 2 (b) 3 (c) 4 (d) 5

Q02. In the formula $X = a + h [\sum f_i u_i / \sum f_i]$, for finding the mean of grouped frequency distribution, is =

- (a) $(x_i + a)/h$ (b) $h(x_i - a)$ (c) $(x_i - a)/h$ (d) $(a - x_i)/h$

Q03. If $\sum f_i = 17$, $\sum f_i x_i = 4P + 63$ and mean is equal to 7, then $P =$

- (a) 12 (b) 13 (c) 14 (d) 15

Q04. If the value of mean and mode are respectively 30 and 15, then median =

- (a) 22.5 (b) 24.5 (c) 25 (d) 26

Q05. Construction of a cumulative frequency table is useful in determining the

- (a) Mean (b) Median (c) Mode (d) all of these

Q06. If the mode of a data is 45 and mean is 27, then median is

- (a) 30 (b) 27 (c) 33 (d) None of these

Q07. If x_i 's are the mid points of the class intervals of grouped data, f_i 's are the corresponding frequency and \bar{x} is the mean, then $\sum (f_i x_i - \bar{x})$ is equal to

- (a) 0 (b) -1 (c) 1 (d) 2

Q08. In formula $X = a + [\sum f_i x_i / \sum f_i]$ For finding the mean of grouped data d_i '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

Q09. For what value of x the mode of the following data is 8:

4	5	6	8	5	4	8	5	6	x	8
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- (a) 5 (b) 6 (c) 8 (d) 4

Q10. The numbers are arranged in ascending order. If their median is 25 then $x =$

5	7	10	12	$2x - 8$	$2x + 10$	35	41	42	50
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- (a) 10 (b) 11 (c) 12 (d) 9

Q11. The median for the following frequency distribution is

X	6	7	5	2	10	9	3
F	9	12	8	13	11	14	7

- (a) 6 (b) 5 (c) 4 (d) 7

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Q12. The wickets taken by a bowler in 10 cricket matches as follows. Find the mode of the data

2	6	4	5	0	2	1	3	2	3
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- (a) 1 (b) 4 (c) 2 (d) 3

Q13. Mean of the data

Class Interval	50 – 60	60 – 70	70 – 80	80 – 90	90 – 100
Frequency	8	6	12	11	13

- (a) 76 (b) 77 (c) 78 (d) 80

Q14. In the following distribution of the heights of 60 students of a class

Then sum of the lower limit of the modal class and upper limit of the median class is

Height (inch)	150 – 155	155 – 160	160 – 165	165 – 170	170 – 175	175 – 180
No. of Students	15	13	10	8	9	5

- (a) 310 (b) 315 (c) 320 (d) 330

Q15. If mean of the distribution is 7.5 Then P:-

X	3	5	7	9	11	13
F	6	8	15	P	8	4

- (a) 2 (b) 4 (c) 3 (d) 6

Q16. A shoe shop in Agra had sold hundred pairs of shoes of particular brand in a certain day with the following distribution. Find mode of the distribution.

Size of the shoes	4	5	6	7	8	9	10
No. of pairs sold	1	4	3	20	45	25	2

- (a) 20 (b) 45 (c) 1 (d) 3

Q01. The median and mode of a distribution are 21.2 and 21.4 respectively .Find its mean.

Q02. If the values of mean and median are 26.4 and 27.2, what will be the value of mode?

Q03. The following data gives the number of boys of a particular age in a class of 40 students.

Calculate the mean age of students:

Age (in yrs)	15	16	17	18	19	20
No. of students	3	8	10	10	5	4

Q04. For the following grouped frequency distribution find the mode.

Class	3 – 6	6 – 9	9 – 12	12 – 15	15 – 18	18 – 21	21 – 24
Frequency	2	5	10	23	21	12	3

Q05. The following table shows the weekly wages drawn by number of workers in a factory

Weekly wages	0 – 100	100 – 200	200 – 300	300 – 400	400 – 500
No. of workers	40	39	34	30	45

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Q06. Find the median for each of the following data:

Marks	< 10	< 30	< 50	< 70	< 90	< 110	< 130	< 150
Frequency	0	10	25	43	65	87	96	100

Q07. Find the median of the following data.

Wages (in Rs)	> 150	> 140	> 130	> 120	< 110	> 100	> 90	> 80
No. of Workers	NIL	12	27	60	105	124	141	150

Q08. In the following distribution locate the median mean and mode.

Monthly electricity	65 – 85	85 – 105	105 – 125	125 – 145	145 – 165	165 – 185	185 – 205
No. of consumer	4	5	13	20	14	7	4

Q09. The marks distribution of 30 students in a mathematics examination are given below

Class Interval	10 – 25	25 – 40	40 – 55	55 – 70	70 – 85	85 – 100
No. of Students	2	3	7	6	0	6

Find the mode of this data.

Q10. Construct the cumulative frequency distribution of following distribution:

Marks	39.5 – 49.5	49.5 – 59.5	59.5 – 69.5	69.5 – 79.5	79.5 – 89.5	89.5 – 99.5
No. of Students	5	10	20	30	20	15

Q11. If the mean of the following data is 18.75. find the value of P

x_i	10	15	P	25	30
f_i	5	10	7	8	2

Q12. Find the mean age in years form a frequency distribution given below:

Age (in yrs)	15 – 19	20 – 24	25 – 29	30 – 34	35 – 39	40 – 44	45 – 49	Total
Frequency	3	12	21	15	5	4	2	63

Q13. Find the median of the following frequency distribution:

Wages (in Rs)	200 – 300	300 – 400	400 – 500	500 – 600	600 – 700
No. of labourers	3	5	20	10	6

Q14. The A.M of the following distribution is 47. Determine the value of P

Classes	0 – 20	20 – 40	40 – 60	60 – 80	80 – 100
Frequency	8	15	20	P	5

Q15. Find the mean, mode and median for the following data:

Classes	0 – 10	10 – 20	20 – 30	30 – 40	40 – 50	50 – 60	60 – 70
Frequency	5	8	15	20	14	8	5

Q16. Find the mean of the following data

Classes	10 – 20	20 – 30	30 – 40	40 – 50	50 – 60
Frequency	5	8	13	15	9

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Q17. The following data gives the information observed lifetimes (in hours) of 225 electrical components. Determine the modal lifetimes of the components.

Life time (hrs)	0 – 20	20 – 40	40 – 60	60 – 80	80 – 100	100 – 120
Frequency	10	35	52	61	38	29

Q18. Calculate the median from

Marks	0 – 20	20 – 40	40 – 60	60 – 80	80 – 100
No. of Students	5	15	30	8	2

Q19. Thirty women were examined in a hospital by a doctor and the number of heartbeats per minute were recorded and summarized as follows. Find the mean heartbeats per minute for these women choosing a suitable method.

Heart beat/minute	65 – 68	68 – 71	71 – 74	74 – 77	77 – 80	80 – 83	83 – 86
No. of Women	2	4	3	8	7	4	2

Q20. Consider the following distribution of daily wages 50 workers of factory

Wages (in Kg)	100 – 120	120 – 140	140 – 160	160 – 180	180 – 200
No. of Workers	12	14	8	6	10

Find the mean daily wages of the works of the factory by using an appropriate method.

Q21. Following table shows the daily pocket allowances given to the children of a multi story building. The mean of the pocket allowances is Rs.18. Find out the missing Frequency

Class Interval	11 – 13	13 – 15	15 – 17	17 – 19	19 – 21	21 – 23	23 – 25
Frequency	3	6	9	13	?	5	4

Q22. A survey regarding the heights (in cm) of 51 girls of Class X of a school was conducted and the following data was obtained. Find the median height.

Height (in cm)	< 140	< 145	< 150	< 155	< 160	< 165
No. of Girls	4	11	29	40	46	51

Q23. Find the mean, mode and median for the following data:

Classes	10 – 20	20 – 30	30 – 40	40 – 50	50 – 60	60 – 70	70 – 80
Frequency	4	8	10	12	10	4	2

Q24. Find the mean of the following data

Classes	0 – 10	10 – 20	20 – 30	30 – 40	40 – 50
Frequency	3	5	9	5	3

Q25. A survey conducted on 20 households in a locality by a group of students resulted in the following frequency table for the number of family members in a household. Find the mode.

Family Size	1 – 3	3 – 5	5 – 7	7 – 9	9 – 11
No. of Families	7	8	2	4	1