VERY SHORT ANSWER TYPE QUESTIONS (1 MARK)

1. Define dispersion.
2. What is the range of the data 7, 12, 18, 22, 11, 6, 26?
3. The variance of 10 observations is 16 and their mean is 12. If each observation is multiplied by 4, what are the new mean and the new variance?
4. The standard deviation of 25 observations is 4 and their mean is 25. If each observation is increased by 10, what are the new mean and the new standard deviation?

SHORT ANSWER TYPE QUESTIONS (4 MARKS)

Calculate the mean deviation about mean for the following data

5. 7, 6, 10, 12, 13, 4, 8, 20
6. 13, 17, 16, 14, 11, 13, 10, 16, 11, 18, 12, 17

Calculate the mean deviation about median for the following data

7. 40, 42, 44, 46, 48
8. 22, 24, 30, 27, 29, 35, 25, 28, 41, 42

Calculate the mean, variance and standard deviation of the following data

9. 6, 7, 10, 12, 13, 4, 8 12
10. 15, 22, 27, 11, 9, 21, 14, 9
11. Coefficients of variation of two distributions are 60 and 80 and their standard deviations are 21 and 36. What are their means?
12. On study of the weights of boys and girls in an institution following data are obtained.

	Boys	Girls
Number	100	50
Mean	60kgs.	4kgs.
Variance	9	4

Whose weight is more variable?

13. Mean of 5 observations is 6 and their standard deviation is 2. If the three observations are 5, 7 and 9 then find the other two observations.
14. Calculate the possible values of x if standard deviation of the numbers 2, 3, 2x and 11 is 3.5.

15. Mean and standard deviation of the data having 18 observations were found to be 7 and 4 respectively. Later it was found that 12 was miscopied as 21 in calculation. Find the correct mean and the correct standard deviation.

LONG ANSWER TYPE QUESTIONS (6 MARKS)

Calculate the mean deviation about mean for the following data.

16.

Size	2	4	6	8	10	12	14	16
Frequency	2	2	4	5	3	2	1	1

17.

Marks	10	30	50	70	90
Frequency	4	24	28	16	8

Calculate the mean deviation about median for the following data

18.

Marks	10	11	12	13	14
Frequency	3	12	18	12	5

19.

x	10	15	20	25	30	35	40	45
f	7	3	8	5	6	8	4	4

20. Calculate the mean and standard deviation for the following data

Wages in Rs/hour	45	50	55	60	65	70	75	80
Number of Workers	3	5	8	7	9	7	4	7

21. Calculate the standard deviation for the following data

Weight	18	19	20	21	22	23	24	25	26	27
Number of students	3	7	11	14	18	17	13	8	5	4

22. Calculate the mean deviation about mean for the following data

Classes	10-20	20-30	30-40	40-50	50-60	60-70	70-80
Frequency	2	3	8	14	8	3	2

23.

Marks	0-10	10-20	20-30	30-40	40-50
Number of Students	5	8	15	16	6

24. Find the mean deviation about the median

Weight (in kg.)	30-40	40-50	50-60	60-70	70-80	80-90
Number of Persons	8	10	10	16	4	2

25. Calculate the mean deviation about median for the following distribution

Classes	0-10	10-20	20-30	30-40	40-50
Frequency	5	10	20	5	10

26. Find the mean and standard deviation for the following

C.I.	25-35	35-45	45-55	55-65	65-75	75-85	85-95
Frequency	21	12	30	45	50	37	5

27. Find the mean and standard deviation of the following data

Ages under (in years)	10	20	30	40	50	60	70	80
Number of members	15	30	53	75	100	110	115	125

28. Find the coefficient of variation of the following data

Classes	20-29	30-39	40-49	50-59	60-69	70-79	80-89	90-99
Frequency	5	15	15	20	18	10	6	4

29. Which group of students is more stable- Group A or Group B?

Classes	5-15	15-25	25-35	35-45	45-55	55-65	65-75
Number in Group A	4	12	22	30	23	5	4
Number in Group B	5	15	20	33	15	10	2

30. For a group of 200 candidates, the mean and standard deviation of scores were found to be 40 and 15 respectively. Later on it was discovered that the scores of 43 and 35 were misread as 34 and 53 respectively. Find the correct mean and correct standard deviation.

Answer

1. Dispersion is scattering of the observations around the central value of the observations
2. 20
3. 48,256
4. 35,4
5. 3.75
6. 2.33
7. 2.4
8. 4.7
9. 9,9.25,3.04
10. 16. 38.68. 6.22
11. 35,45
12. Boys weight
13. 3 and 6
14. 3,7/3
15. 6.25, 2.5
16. 2.8
17. 16
18. 0.8
19. 10.1
20. 63.6, 10.35
21. 2.1807
22. 10
23. 9.44
24. 11.44
25. 9
26. 61.1, 15.93
27. 35.16, 19.76
28. 31.24
29. Group A
30. 39.955, 14.9