12.

Measures of Central tendency- B

practical 10:

1. Compute median for the following data.

Income(Rs)	Below 3000	Below 4000	Below 5000	Below 6000	Below 7000
No.of Persons	10	22	37	45	50

2. For the following distribution M=33.5, Find the missing frequency.

C.I	0-10	10-20	20-30	30-40	40-50	50-60	60-70
f	4	6	60	-	40	6	4

3. The median for the following distribution is 26. Find the missing frequency.

C.I	0-10	10-20	20-30	30-40	40-50
f	3	5	-	6	2

4. Calculate median and mode for the following data.

Height (Cms)	Less than 145	145-150	150-155	155-160	160 and above
No.of persons	5	10	15	10	5

5. Find GM and HM of 9, 15, 25.6, 32.47

6. Calculate GM & HM for the following distribution.

C.I	0-10	10-20	20-30	30-40	40-50
f	4	8	10	6	7

7. The population of a city increased at the rates of 20% and 12% in 2 successive years. In the next 3 years it decreased at the rates of 5%, 7% and 4% respectively. Find the average rate of growth.

8. A boy climbs up a slide at a speed of 16cms per second and comes down at a speed of 45cms per second. Find his average speed.

9. Find Q_1 and P_{20} for the following distribution.

C.I	50-55	55-60	60-65	65-70	70-75	75-80	80-85
f	5	10	22	30	16	12	15

10. Calculate D_2, Q_3 and P_{35} for the following distribution.

C.I	40 – 59	60-79	80-89	90-99	100-109	110-119	120-139	140-159
f	5	16	16	16	16	16	16	16

Practicals

Practical 11:

Measures of Dispersion- A

1. Find range and its relative measure from the following data: 40, 85, 100, 15, 5, 70, 65.

2. Compute coefficient of Q.D for the following distribution.

C.I	0 – 9	10 – 19	20 – 29	30 – 39	40 – 49
f	5	10	22	30	16

3. Calculate Q.D for the data given below:

Mid points	100.5	101.5	102.5	103.5	104.5
f	3	10	15	8	4

4. Calculate mean deviation from median for the following data.

x	5	15	25	35	45	55	65
f	8	12	10	8	3	2	7

5. Calculate mean deviation from mean and median for the following distribution.

Marks	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80
f	7	32	56	106	180	164	86	44

6. Compute mean deviation from mode for the following distribution.

C.I	0-10	10-20	20-30	30-40	40-50
f	5	8	12	8	5

Practical 12:

Measures of Dispersion- B

1. Calculate S.D for the following data:

x	600	800	1000	1200	1400
f	5	11	26	10	8

2. Compute S.D for the following distribution.

Marks	0-15	15-30	30-45	45-60	60-75	75-90	90-105
No. of students	20	30	30	35	45	15	5

3. A sample of 35 values has mean 80 and S.D 4. A second sample of 65 values has mean 70 and S.D 3. Find the S.D of the given hundred values.

4. Two samples of size 10 and 20 have mean 22.5. If their respective standard deviations are 12 and 7. Find the S.D of the combined sample.

5. Compute co-efficient of variation for the following distribution.

Marks	0-20	0-20	40-60	60-80	80-100
No. of Students	8	12	30	20	10

6. Scores of two golfers in 12 rounds were as follows:

Golfer(A): 74, 75, 78, 72, 77, 79, 81, 76, 73, 71, 71, 73

Golfer(B): 86, 84, 80, 88, 89, 85, 86, 82, 83, 70, 71, 70

Find out which golfer scores more and who may be considered to be a more consistent player.

Practical 13:   Measures of Skewness

1. The sum of lower and upper quartiles is 55 and their difference is 15. If the median is 30 find the co-efficient of skewness.

2. Compute Karl-pearson's co-efficient of skewness for the following distribution.

Wages(Rs)	70-80	80-90	90-100	100-110	110-120	120-130	130-140	140-150
No. of persons	12	18	35	42	50	45	20	8

3. Calculate Pearson's co-efficient of skewness for the following data.

C.I	10-19	20-29	30-39	40-49	50-59
f	4	5	12	7	4

4. Compute Bowley's co-efficient of skewness for the following distribution.

X	58	59	60	61	62	63	64	65
f	10	18	30	42	35	28	16	8

The first four central moments of a distribution are 0, 12, -3 and 176 comment on skewness and kurtosis

Age (yrs)	0 – 10	10 – 20	20 – 30	30 – 40	40 – 50	50 – 60	60 – 70	70 – 80
No. of Persons	18	16	15	12	10	7	3	1