## **Programme: F.Y.B.COM.(SEM-I)**

## Course: Mathematical and Statistical Techniques-I

## **Topic: Measures of Central Tendency**

1. Find arithmetic mean for the following data:

**a.** Age in year : 0-10 10-20 20-30 30-40 40-50 50-60

No. of person: 5 15 15 20 8 4

**b.** 34,78,12,90,54,34,40

**c.** X : 5 10 15 20 25 F : 3 1 4 2 10

- 2. For 200 workers from factory A, the arithmetic mean and standard deviation of daily wages are 120 and 10 respectively. For 150 workers from factory B the corresponding figures are 100 and 20 respectively. Find the combined arithmetic mean and standard deviation of wages if both the groups are taken together.
- **3.** Find the weighted mean for the given data:

X: 28 29 25 32 40 W: 3 7 4 5 2

- **4.** The mean of 16 items was found to be 30. On rechecking, it was found that one item was wrongly taken as 22 instead of 32. Find the correct mean.
- **5.** Calculate Mode for the following data.

**a.** 12, 34, 11, 45, 23, 12, 20, 11, 12, 23, 12

**b. C.I** 120-125 125-130 130-135 135-140 140-145 145-150 **f** 7 10 18 20 12 7

- **6.** Find the median for the following data:
  - **a.** 2, 9, 7, 3, 4, 12, 5, 6, 8, 2
  - **b.** 12, 45, 23, 9, 12, 7, 1
  - 0-5 5-10 10-15 15-20 20-25 **c.** Class interval 10 frequency 15 23 25 22 30-39 40-49 50-59 0-9 10-19 20-29 **d.** Marks No. of student 12 18 30 20 15 5

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- 7. Prepare the cumulative frequency table of
  - a) Less than type,
- b) Greater than type,

For the following frequency distribution of 100 workers.

Age in year	20-25	25-30	30-35	35-40	40-45	45-50	50-55	55-60
No. of worker	3	9	15	25	23	12	10	3

Also state how many workers are?

- (a) Less than or equal to 40 year?
- (b) Greater than or equal to 50 year?
- **8.** Draw histogram and locate the mode.

Sales in 000's	80-90	90-100	100-105	105-110	110-120	120-130
No of companies	110	125	145	143	100	96

**9.** The following data give the fine paid by the defaulters in a particular class.

Draw Histogram and hence find mode.

Fine paid	20-40	40-60	60-80	80-100	10-120
Defaulters	7	22	40	38	21

10. Draw o-give curve for the following data and hence locate the quartile.

Daily wages	20-40	40-60	60-80	80-100	100-120	120-140
No of worker	7	12	16	13	10	4

11. Find the missing term for the given data where AM is 33.5.

		0-10	10-20	20-30	30-40	40-50
F	: \	4	16	60	?	40

12. Find the missing term for the given data where median is 46

C.I : 10-20 20-30 30-40 40-50 50-60 F : 7 2 ? 12 19

13. Find the missing term for the given data where mode is 320

C.I : 100-300 300-500 500-700 700-900 F : 23 30 ? 20