Class: X **Subject: Mathematics** **Assignment 3: July2010** **Chapter: STATISTICS**

1. The following table gives the distribution of total household expenditure (in Rs) of 200 manual workers in a city:

Expenditure (in Rs)	100 - 150	150 - 200	200 - 250	250 - 300	300 - 350	350 - 400	400 - 450	450 - 500
No of workers	24	40	33	28	30	22	16	7

Find mean, mode and median of the above data. Also compare and interpret the three measures of central tendency. (Ans: Rs.266.25, Rs.184.78~, Rs.255.36~)

2. If the mean of the following distribution is 54. Find the value of p.

Class	0 - 20	20 - 40	40 - 60	60 - 80	80 – 100
Frequency	7	p	10	9	13

(Ans: p=11)

3. The mean of the following frequency table is 50. Find the missing frequencies.

Class	0 - 20	20 - 40	40 - 60	60 - 80	80 -100	Total
Frequency	17	F1	32	F2	19	120

(Ans: F_1=28,F_2=24)

4. Compute the median from the following date:

Class Marks (x_i)	115	125	135	145	155	165	175	185	195
Frequency (f_i)	6	25	48	72	116	60	38	22	13

Also, find the mean and mode of the above data.(Ans: 154.22~,154.68~,154.4)

5. If the median of the following data is 32.5, find the values of x and y:

Class intervals	0 - 10	10 - 20	20 - 30	30 - 40	40 - 50	50 - 60	60 - 70	Total
Frequency	x	5	9	12	y	3	2	40

Also, find the mean and mode of the above data. (Ans: x=3, y=6; Mean=32.5, Mode=33.33~)

6. Find the median of the following cumulative frequency distribution graphically and verify it by actual calculation:

Marks	Below 38	Below 40	Below 42	Below 44	Below 46	Below 48	Below 50	Below 52
No of students	0	3	5	9	14	28	32	35

(Ans: 46.5)

7. The Mode of the following frequency table is 26.Find the missing frequencies if the total frequency is 50.

Class	0 - 10	10 - 20	20 - 30	30 - 40	40 – 50	50 - 60
Frequency	3	F_1	15	F_2	8	4

(Ans: F_1=9,F_2=11)

8. Find the Mean, Modal and Median lifetime of the 100 tube lights from the following data:

Lifetime (in hours)	1000-1099	1100-1199	1200-1299	1300-1399	1400-1499	1500-1599	1600-1699	1700-1799	1800-1899
No. of tube lights (f_i)	5	9	11	14	18	17	12	9	5

(Ans: 1454.5hours, 1479.5hours, 1460.61hours~)