D-8/2110 5533/NJ

Computer oriented statistical methods-I-103

SEM-I

Time- 3hrs **M.M. 30**

Section A

1. Describe the methods generally employed in the collection of statistical data, stating briefly their merits and demerits.
2. Tabulate the following:

   Out of a total number of 10000 candidates who applied for jobs in a government department, 6854 were males, 3146 were graduates and others, non-graduates. The number of candidates with some experience was 2623 of whom 1860 were males. The number of male graduates was 2012. The number of graduates with experience was 1093 that includes 323 females.

3. Represent the following data by means of histogram.

Weekly wages ('000)	10-15	15-20	20-25	25-30	30-40	40-60	60-80
No. of workers	7	19	27	15	12	12	8

4. Convert the following distribution into "more than" frequency distribution

Weekly wages less than ('000)	20	40	60	80	100
No. of workers	41	92	156	194	201

For the data given above, draw "less than" and "more than" ogives and hence find the value of the median. 2×4=8

Section B

5. The numbers 3.2, 5.8, 7.9 and 4.5 have frequencies $x, x+2, x-3$ and $x+6$ respectively. If the arithmetic mean is 4.876, find the value of x.

6. Calculate the mean deviation from median of the following distribution:

Class interval:	50-100	100-150	150-200	200-250	250-300	300-350
Frequency	7	18	25	31	15	4

7. Calculate the Karl Pearson's co-efficient of skewness from the following data:

Size	1	2	3	4	5	6	7
Frequency:	10	18	30	25	12	3	2

8. The first three moments of a distribution about the value 67 of the variable are 0.45, 8.75 and 8.91. Calculate the second and third central moments, and the moment coefficient of skewness. Indicate the nature of the distribution. 2×4=8

Section C

9. Write in brief:
   a) State the name of the various types of graphs used for presenting a frequency distribution.
   b) What do you mean by histogram?
   c) Define less than and more than ogives.
   d) State the principles underlying classification of data.
   e) Distinguish between skewness and kurtosis.
   f) Prove that for any frequency distribution, Kurtosis is greater than unity.
   g) What do you understand by absolute and relative measure of dispersion? 7×2=14