SHRIMATHI DEVKUNVAR NANALAL BHATT VAISHNAV COLLEGE FOR WOMEN
(AUTONOMOUS)
(Affiliated to the University of Madras and Re-accredited with 'A+' Grade by NAAC)
Chromepet, Chennai - 600 044.
B.Sc.DS - END SEMESTER EXAMINATIONS - NOV'2024
SEMESTER - III
22UDSAT3003 - Allied Statistics - I

Total Duration : 2 Hrs.30 Mins. Total Marks : 60

Section B

Answer any **SIX** questions $(6 \times 5 = 30$ Marks)

1. Define Primary Data and describe the various methods used to collect the primary data.
2. Describe the characteristics of good measures of central tendency.
3. Compute the Quartile Deviation for the following data:

Salary (in Rs.)	**No.of workers**
1500	4
2000	20
2400	21
2800	16
3100	9

4. Compute Spearman's Rank Correlation coefficient for the following data:

Advertisement Cost (Rs.In 1000)	**Sales (Rs.In lakhs)**
39	47
65	53
62	58
90	86
82	62
75	68
25	60
98	91
36	51
78	84

Contd...

5. Prepare a histogram and frequency polygon for the following frequency distribution:

Weight (in Kg.)	**No.of Men**
41 - 45	4
46 - 50	5
51 - 55	9
56 - 60	6
61 - 65	11
66 - 70	5
71 - 75	7
76 - 80	3

6. The following table gives the output (in units) of workers in certain factory. The frequency of the class interval 490 - 520 is missing

Output (in units)	**No.of workers**
400 - 430	31
430 - 460	58
460 - 490	60
490 - 520	?
520 - 550	27

It is known that the mean of the above frequency distribution is 472. Predict the missing frequency value.

7. Define Standard Deviation. Also describe the merits and demerits.
8. Compare (i) Positive and Negative Correlation
   (ii) Linear and Non Linear Correlation
   (iii) Multiple and Partial Correlation.

Section C

Answer any **THREE** questions $(3 \times 10 = 30$ Marks)

9. Explain the different types of variables illustrate with an example.
10. Explain Diagrammatic Representation of Statistical data. Illustrate with an example.

Contd...

11. A study of the profit earned by 40 firms in an automobile industry in the first quarter of the year 2020 revealed the following information. Determine Mean, Median and Mode for the data given below:

Profit (in Lakhs)	**No.of** firms
10 - 15	6
15 - 20	7
20 - 25	14
25 - 30	4
30 - 35	5
35 - 40	4

12. Find the standard deviation of the weights of the 100 male students in a particular college. Compute Standard Deviation.

Weights (in Kgs.)	**No.of Students**
60 - 62	5
63 - 65	18
66 - 68	42
69 - 71	27
72 - 74	8

13. Evaluate and interpret the data by using karl-pearson coefficient of correlation method.

X	**Y**
15	85
18	93
20	95
24	105
30	120
35	130
42	150
50	160

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