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.CSc.(DS) - END SEMESTER EXAMINATIONS - APRIL 2025
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. Classify the types of variables for data collection.
2. Explain:(i) Pie chart (ii) Bar diagram (iii) Line diagram
3. Compute the mean and median for the following data:

Daily Wages (₹)	50-55	55-60	60-65	65-70	70-80	80-100
No. of Employees	10	22	30	20	12	6

4. Compute quartiles for the following data:

X	10-20	20-30	30-40	40-50	50-60	60-70	70-80
f	10	20	30	40	30	20	10

5. Define correlation. Classify and explain the uses of a scatter plot.
6. Explain the uses of i) Histogram ii) Frequency Polygon
7. The weekly sales at two products A and B were recorded. Find the coefficient of variance and find which product influences the sales.

X	59	75	27	63	27	28	56
Y	150	200	125	310	330	250	225

8. The number of yeast cells counted in a haemocytometer is compared to the theoretical values is given below. Test the experimental result support the theory.

No. of Yeast Cells	**Observed Frequency**	**Expected Frequency**
0	103	106
1	143	141
2	98	95
3	42	41
4	8	14
5	6	5

Contd...

Section C

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

9. Explain the procedure for constructing a frequency table.

10. Construct Ogives for the following data:

Height (in inches)	**Frequency (f)**
140 - 145	10
145 - 150	10
150 - 155	30
155 - 160	15
160 - 165	10
165 - 170	5

11. Explain the characteristics of a good average.

12. Obtain the Rank Correlation Coefficient between the variables X and Y from the following pairs of observed values:

X:	50	55	65	50	55	60	50	65	70	75
Y:	110	110	115	125	140	115	130	120	115	160

13. Calculate the Standard Deviation and Variance for the following data and comment on it:

Marks	0-10	10-20	20-30	30-40	40-50	50-60	60-70
f	8	12	17	14	9	7	4

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