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.Com.CS - END SEMESTER EXAMINATIONS APRIL - 2024
SEMESTER - II
23UBCAT2002 - Business Statistics

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

Section B

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

1. Construct a Histogram and frequency polygon for the following distribution.

Marks	21-27	28-34	35-41	42-48	49-55	56-62	63-69
No.of.students	2	3	10	18	15	5	6

2. Find the standard deviation of the following distribution

Age	20-25	25-30	30-35	35-40	40-45	45-50
No.of.persons	170	110	80	45	40	35

3. Calculate the rank correlation between the ranks given for X and Y

X	10	8	1	2	6	9	3	5	4	7
Y	6	10	5	4	3	1	2	9	8	7

4. Using three year moving average determine the trend and short-term fluctuation

Year	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977
Production in tonnes	21	22	23	25	24	22	25	26	27	26

5. The following is the age distribution of 100 persons in a street, calculate arithmetic mean

Age	0-10	10-20	20-30	30-40	40-50	50-60
No.of.persons	5	10	25	30	20	10

6. Calculate the mean deviation about the median for the following data

X	10	11	13	14	12
f	3	12	12	3	18

7. Define correlation, what are the types of correlation and write the properties of correlation.

8. Fit a trend line to the following data by the method of semi-averages

Year	1989	1990	1991	1992	1993	1994	1995
Sales of firm A	112	115	124	120	118	126	122

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Section C

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

9. Define Statistics. Write the uses and limitations of Statistics.

10. Calculate the mean, median and mode from the following data

Marks	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90
No.of.students	4	12	40	41	27	13	9	4

11. Calculate quartile deviation and its coefficient for the following distribution

Class	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80
No.of.students	8	12	10	48	42	18	8	4

12. Find the correlation coefficient for the following data

X	65	66	67	67	69	70	72
Y	67	68	65	68	72	69	71

13. Fit a straight line trend for the following data by the method of least squares

Year	1997	1998	1999	2000	2001
Sales	70	74	80	86	90

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