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. CA - END SEMESTER EXAMINATIONS - NOV'2024
SEMESTER - III
21UCCAT3003 - Business Statistics

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

Section B

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

1. Represent the following data draw a pie diagram.

Items	**Expenditure (in Rs.)**
Food	87
Clothing	24
Recreation	11
Education	13
Rent	25
Miscellaneous	20

2. Calculate the Rank Correlation

X:	1	3	5	4	2
Y:	5	2	1	3	4

3. Calculate 4-years moving average and find the trend values

Year	2015	2016	2017	2018	2019	2020	2021	2022
Sales (Rs. In lakhs)	13	14	18	20	22	27	30	31

4. Find Fishers Price index number for the following

Commodity	**Price**		**Quantity**	
	2012	**2021**	**2012**	**2021**
A	5	10	8	12
B	8	12	12	15
C	9	14	15	20

5. Find Standard Deviation

X:	5	10	15	20	25
F:	2	8	10	6	4

6. You are given the following information about advertising and sales:

	Advertisement Exp	Sales
Mean	10	90
S.D	3	12

Correlation coefficient=0.8

Find the likely sales when advertisement expenditure is 15 lakhs.

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7. The following are the exports in tonnes for a company in 12 months. Using semi-averages method and find the trend values

280	300	280	280	270	240
230	230	220	200	210	200

8. From the following data prepare quantity index numbers for the year 2023 taking 2020 as the base year.

Year	**Commodity I**		**Commodity II**		**Commodity III**	
	Price	**Quantity**	**Price**	**Quantity**	**Price**	**Quantity**
2020	5	10	8	6	6	3
2023	4	12	7	7	5	4

Section C

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

9. Explain the different types of diagram.

10. Find the Mean, Median and Mode of the following observation

Classes	0-50	50-100	100-150	150-200	200-250	250-300	300-350
Frequency	2	3	5	6	5	3	1

11. Calculate the two regression equations of X on Y and Y on X from the data given below, taking deviations from actual means of X and Y.

Price	10	12	13	12	16	15
Amount demanded	40	38	43	45	37	43

12. Fit a straight line by the method of least squares to the following data.

Year	2015	2016	2017	2018	2019	2020
Production(Tonnes)	24	25	29	26	22	24

Estimate the likely production for the year 2023.

13. Find Cost of living index for the following

Commodity	**Base year Price**	**Current year Price**	**Weights**
A	6	10	5
B	2	2	4
C	4	6	6
D	10	12	4
E	8	12	8

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