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 NOVEMBER -2023
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. Explain 'Pie Diagram'.

2. Compute the missing frequency from the following distribution if Mean is 38.

Marks	10	20	30	40	50	60	70
No. of Students	8	11	20	25	?	10	3

3. Weekly wages of a labourer are given below. Compute Q.D and coefficient of Q.D

Weekly wage (Rs.)	100	200	400	500	600	Total
No. of weeks	5	8	21	12	6	52

4. You are given the following data:

Particulars	**x**	**y**
Arithmetic Mean	36	85
Standard Deviation	11	8
Correlation coefficient between x and y	0.66	

Find the two regression equations and compute the value of x when y = 75.

5. Ranking of 10 trainees at the beginning (x) and at the end (y) of a certain course are given below:

Trainees	**A**	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**I**	**J**
x	1	6	3	9	5	2	7	10	8	4
y	6	8	3	7	2	1	5	9	4	10

Find Rank Correlation.

6. Applying three yearly moving average, determine the short-term fluctuations:

Year	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
Production ('000tons)	21	22	23	25	24	22	25	26	27	26

Contd...

7. Compute the cost of living index method from the following data:

Item	Base year price	Current year price	Weights
Food	39	47	4
Fuel	8	12	1
Clothing	14	18	3
House rent	12	15	2
Miscellaneous	25	30	1

8. Ascertain the price index number from the following data:

Commodity	A	B	C	D	E
Quantity	10	15	15	20	5
Price in 2018 (Rs.)	100	15	70	20	5
Price in 2019 (Rs.)	120	20	60	30	7

Section C

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

9. Describe briefly about presentation of statistical data through diagrams.

10. Compute Mean, Median and Mode:

Marks	11-20	21-30	31-40	41-50	51-60	61-70	71-80
No. of Students	42	38	120	84	48	36	31

11. Ascertain the coefficient of correlation between x – Advertisement Expenditure and y – Sales.

x	10	12	18	8	13	20	22	15	5	17
y	88	90	94	86	87	92	96	94	88	85

12. Calculate trend values by applying the method of least squares from the data given below and estimate the sales for 2018.

Year	2011	2012	2013	2014	2015
Sales (in lakhs)	70	74	80	86	90

13. Justify that Fisher's Ideal index satisfies the time and Factor Reversal Test using the following data:

	Price		Quantity	
Item	Base year	Current year	Base year	Current year
A	6	10	50	56
B	2	2	100	120
C	4	6	60	60
D	10	12	30	24
E	8	12	40	36

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