

**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.(BIM) END SEMESTER EXAMINATIONS APRIL-2022

SEMESTER - I

21UBBAT1001 - Business Statistics

Total Duration : 3 Hrs.

Total Marks : 60

Section A

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

1. Define Classification and explain its types with examples.
2. Draw Ogives and find the value of median.

Wages	70-80	80-90	90-100	100-110	110-120	120-130	130-140
No. of Workers	4	8	10	16	12	7	3

3. Find the mean, median and mode of the following data:

CI	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80
F	2	5	10	15	11	10	2	5

4. Explain the scatter diagram method of finding the relationship between the variables.
5. Find the Karl Pearson coefficient of Correlation:

X	2	7	10	12	18	20	22	19
Y	6	8	12	10	23	10	11	10

6. Find the trend values using (4 year) moving average method:

Year	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Value	12	14	18	15	15	20	24	22	23	25

7. Explain the components of time series.
8. From the following data construct an index for 2015 taking 2014 as base by the Average of price relatives method using (i) arithmetic mean (ii) Geometric mean

Commodities	Price in 2014	Price in 2015
	(Rs.)	(Rs.)
A	50	70
B	40	80
C	80	90
D	110	120
E	20	20

Contd...

Section B

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

9. Explain the types of diagrams with example.

10. Find the coefficient of variation:

CI	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80
F	10	15	15	23	22	19	12	4

11. Following are the marks obtained by a class of students in Accountancy and Mercantile law. Compute the two regression equations.

Marks in Accountancy	80	45	55	56	58	60	65	68	70	75	85
Marks in Mercantile law	82	56	50	48	60	62	68	65	70	74	90

12. Find the trend values using the method of least squares:

Year	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Value	10	15	18	15	21	29	25	26	31	32

13. Find the fisher ideal index and prove that it satisfies time reversal test and factor reversal test:

Commodity	Price		Quantity	
	2018	2020	2018	2020
A	6	10	50	56
B	2	2	100	120
C	4	6	60	60
D	10	12	30	24
E	5	12	40	56
