ST. JOSEPH'S UNIVERSITY, BENGALURU -27
B.Sc. (Open Elective) – I SEMESTER
SEMESTER EXAMINATION: OCTOBER 2022
(Examination conducted in December 2022)
STOE 2 – BUSINESS STATISTICS

Time: 2 Hours   **Max Marks: 50**
This paper contains TWO printed pages and ONE part

Answer any five from the following   **10*5=50**

1. A) Define Bivariate data, Time series data and Cross-sectional data with an example for
    each.   (4)

    B) Calculate the Mode and Median for the following data: (6)

Marks	0-10	10-20	20-30	30-40	40-50	50-60
Students	2	10	20	15	10	3

2. A) Distinguish between absolute and relative measures of variation.   (2)

    B) The following is the distribution of wages of 300 workers. Calculate the variance, S.D
    for the following data: (5)

Wage (in Rs.)	0-30	30-60	60-90	90-120	120-150	150-180	180-210
No. of Workers	9	17	43	82	81	44	24

    C) Define Kurtosis. Mention the different types of kurtosis.   (3)

3. A) Calculate the Karl Pearson's coefficient of Skewness.   (6)

C.I	100-104	104-108	108-112	112-116	116-120	120-124
frequency	6	14	18	20	10	2

    B) State any four differences between correlation and regression.   (4)

4. A) Using scatter diagram explain the different types of correlation.   (5)

    B) Obtain the regression equation of y on x from the following data: (5)

X	9	8	20	2	7	1	9	7	9	8
Y	6	3	7	8	8	9	10	1	3	5

5. A) Twelve students obtained the following marks in Statistics & Accountancy.   (5)

Students	A	B	C	D	E	F	G	H	I	J	K	L
Statistics	60	34	40	50	45	41	22	43	42	66	64	46
Accountancy	75	32	35	40	45	33	12	30	36	72	41	57

    Find the Coefficient of Rank correlation.

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B) Define Index numbers. Distinguish between weighted and unweighted index numbers. Mention the different types of it. (5)

6. A) Compute Laspeyre's, Paasche's and Dorbish-Bowley Price Index numbers for the following data. (6)

Commodity	Base Year		Current Year	
	Price (Rs)	Quantity	Price (Rs)	Quantity
A	3	25	5	28
B	1	50	3	60
C	2	30	1	30
D	5	15	6	12

B) Give any two limitations of Index numbers. (2)
C) Mention any two utilities of time series. (2)

7. A) Explain the different components of Time series with an example for each. (5)

B) Find the trend values by using 4-yearly and 3-yearly centered moving averages for the following data. (5)

Year	1998	1999	2000	2001	2002	2003	2004	2005
Value	54	40	47	48	42	42	36	42

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