Code No: 50126/B/R19

FACULTY OF SCIENCE

B.Sc. (**CBCS**) III-Year (VI-Semester) Regular & Backlog Examinations, June-2023

Statistics-VI (B)

(Analytical Statistics-II)

Time: 3 Hours Max Marks: 80

SECTION-A (4x5=20 Marks)

Answer any Four questions from the following

1. Discuss one real life application of Multivariate Analysis.
2. Define Multivariate Data Analysis.
3. Define Net Reproduction Rate.
4. Discuss the notation of Base year, price and Quantity.
5. How is per capita income calculated?
6. Define value index number.

SECTION-B (4x15=60 Marks)

Answer all the following questions

7. (a) Define Multinational distribution with real life applications.

(OR)

(b) Define Principal component Analysis and its applications.

8. (a) Discuss Multidimensional scaling techniques.

(OR)

(b) Define Factor Analysis and discuss its applications.

9. (a) Define Mortality rates in Vital Statistics.

(OR)

(b) Estimate the standardized death rates for the two countries from the data in the table given below.

Age Group(in yrs)	Death Rate per 1000		Standardized population (in lakhs)
	Country A	Country B	
0-4	20.00	5.00	100
5-14	1.00	0.50	200
15-24	1.40	1.00	190
25-34	2.00	1.00	180
35-44	3.30	2.00	120
45-54	7.00	5.00	100
55-64	15.00	12.00	70
65-74	40-00	35.00	30
74 and above	120.00	110.00	10

10. (a) How is National Income Estimated? Discuss its utilities and difficulties?

(OR)

(b) From the following data, compute the Laspeyer's and Paasche's Price Index and Quantity index for 2020 with 2015 as the base year. Verify Factor Reversal test for the same.

Commodity	Year 2015		Year 2020	
	Quantity	Value	Quantity	Value
A	50	350	60	420
B	120	600	140	700
C	30	330	20	200
D	20	360	15	300
E	5	40	5	50