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.A.(Eco) END SEMESTER EXAMINATION APRIL-2023
SEMESTER - V
UEC/CT/2004 - Statistics for Economists-II

Total Duration : 3 Hrs   Total Marks : 75

Section A

Answer any **TEN** questions $(10 \times 2 = 20$ Marks)

1. Define population and sample.
2. What is called random sampling method?
3. What is multiple correlation?
4. What do you mean by rank correlation and formula?
5. Define regression equations.
6. What is regression coefficient?
7. Define index number.
8. Give any two uses of index numbers.
9. Define secular trend give an example.
10. Define seasonal variation.
11. What Is a Sampling Error?
12. What does Wholesale Prices Index indicate?

Section B

Answer any **FIVE** questions $(5 \times 5 = 25$ Marks)

13. What Are the Advantages and Disadvantages of Random Sampling?
14. Calculate the coefficient of rank correlation.

X	18	28	35	44	35	26	37	48
Y	83	51	34	34	34	28	46	47

15. Distinguish between R^2 and adj R^2.
16. Calculation of cost of living Index or Consumer Price Index is calculated as follows:

Commodities	q_0	p_0	p_1
Wheat	20	10	12
Rice	5	30	35
Ghee	2	20	30
Sugar	4	25	40

17. Fit a linear trend for the following time series and estimate the trend value 2010.

Year	2004	2005	2006	2007	2008	2009
Sales	79	87	106	111	117	130

18. Distinguish between correlation and regression.
19. Explain the problems in the construction of index numbers.

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Section C

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

20. Explain the different forms of sampling.

21. Calculate Karl Pearson's coefficient of correlation for the following data using step deviation method.

X	300	350	400	450	500	550	600	650	700
Y	800	900	1000	1100	1200	1300	1400	1500	1600

22. Explain the different Types of regression analysis.

23. Calculate Price Index Number by: (a) Laspeyre's method, (b) Paasche's method.

Commodity	1990		1995	
	Price	**Quantity**	**Price**	**Quantity**
A	20	15	30	20
B	15	10	20	15
C	30	20	25	10
D	10	5	12	10

24. Explain different components of a time series.