B.A DEGREE (CBCS) REGULAR / IMPROVEMENT / REAPPEARANCE EXAMINATIONS, OCTOBER 2023

Third Semester

COMPLEMENTARY COURSE - ST3CMT51 - QUANTITATIVE TECHNIQUES FOR ECONOMIC ANALYSIS I

Common to B.A Economics Model II Foreign Trade, B.A Economics Model II Insurance & B.A History Model II Forestry and Environmental History

2017 Admission Onwards

EAA24EBD

Time: 3 Hours   Max. Marks : 80

Part A

*Answer any **ten** questions.*

*Each question carries **2** marks.*

1. Write a situation where stratified random sampling is preferred over simple random sampling.

2. What is a histogram?

3. A car is traveling the first 20 Km in a speed 40 Km/h and next 20 Km in 60 Km/h. Find the average speed of the car.

4. Define Quartile Deviation.

5. Define Geometric mean.

6. Write the second central moment in terms of raw moments.

7. Lorenz curve is a measure of ....

8. What is the measure of correlation?

9. What is the importance of scatter diagram?

10. Define Correlation.

11. Write any two examples of an irrational number.

12. In how many years an amount of Rs. 5000/- will double in the simple interest of 10% ?

(10×2=20)

Part B

*Answer any **six** questions.*

*Each question carries **5** marks.*

13. Distinguish between census and sampling methods of collecting data compare their merits.

14. What is meant by tabulation? What are the different parts of a table?

15. Explain the relative measures of central tendency.

16. Daily wages of 12 workers are given below. Find the coefficient of variation of wages?
Wages (in Rs): 480 600 740 550 600 620 400 550 650 800 700 550

17. Calculate Pearson's coefficient of skewness of the following data.

Variable	0 - 5	5 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35
Frequency	3	5	9	15	21	10	7

18. Find the Kurtosis of the data given below 10, 23, 15, 27, 5

19. Explain how to find the rank correlation coefficient when there is tied ranks?

20. From the following data, obtain the two regression lines.

Sales	91	97	108	121	67	124	51	73	111	57
Purchase	71	75	69	97	70	91	39	61	80	47

21. What is an irrational number? Write any two properties of an irrational number.

(6×5=30)

Part C

*Answer any **two** questions.*

*Each question carries **15** marks.*

22. Explain and illustrate the use of statistics for Economic analysis and planning.

23. What is meant by a measure of central tendency? What are the characteristics of a good measure of central tendency? Discuss the merits and demerits of the various statistical averages in light of these characteristics.

24. (i) Explain why standard deviation is called the best measure of dispersion.
(ii) Calculate the standard deviation for the following data.

Class	5- 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45
Frequency	6	5	15	19	5	4	3	2

25. In a partially destroyed laboratory record of an analysis of correlation data, the following results are legible. Variance of X = 9. Regression equations: 8X − 10Y +66 = 0 and 40X − 18Y = 214. What are (i) the mean values of X and Y, (ii)the correlation between X and Y and (iii) the standard deviation of Y.

(2×15=30)