23104701

QP CODE: 23104701

Reg No : .....

Name : .....

B.Sc DEGREE (CBCS) REGULAR/IMPROVEMENT/REAPPEARANCE EXAMINATIONS, FEBRUARY 2023

First Semester

Complementary Course - ST1CMT01 - STATISTICS - DESCRIPTIVE STATISTICS

(Common for B.Sc. Mathematics Model I , B.Sc Physics Model I, and B.Sc Computer Applications Model III Triple Main)

2017 Admission Onwards

30F36A7E

Time: 3 Hours Max. Marks : 80

Part A

*Answer any **ten** questions.*

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

1. Explain any one method of collecting primary data.
2. Distinguish between time series data and cross-sectional data.
3. Define population and sample.
4. Define stratified sampling.
5. Mention any two desirable properties of a good measure of dispersion.
6. Mention any two disadvantages of mean deviation.
7. Define variance.
8. What are the uses of box plot in the data analysis?
9. The first three raw moments about origin are 2, 20 and 40. Find the first three central moments.
10. If the first three moments about origin are 1, 7 and 38 respectively, obtain the coefficient of skewness.
11. Define Laspeyre’s Index number.

12. Why Fisher's index number is called an ideal index number?

(10×2=20)

Part B

*Answer any **six** questions.*

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

13. What are the limitations of Statistics?

14. What is meant by classification? Distinguish between qualitative classification and quantitative classification.

15. Explain various scaling techniques in statistical analysis.

16. Find mode for the data:

Class	0-20	20-40	40-60	60-80	80-100
Freq.	4	6	16	6	3

17. Define mode. Mention its merits and demerits.

18. Calculate standard deviation for the following data

X	20	22	15	8	4
Frequency	10	20	15	8	4

19. Explain skewness and its different measures.

20. What are the uses and limitations of index numbers?

21. Define time reversal test. Examine whether Laspeyre's and Fisher's index numbers satisfy this test.

(6×5=30)

Part C

*Answer any **two** questions.*

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

22. (a) Define tabulation. Mention the main points to be remembered in tabulation.
    (b) What are the advantages and disadvantages of a frequency table?

23. Calculate the geometric mean and harmonic mean for the data

X	4	5	6	8	12	15	18	2
Freq.	6	9	12	22	25	10	5	1

24. Calculate Bowley's measure of skewness for the following data.

Class	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80
Freq.	8	9	15	18	22	11	5	1

25. Construct Laspeyer's, Paasche's and Fisher's index numbers for the following data.

Items	Price (p_0)	Quantity (q_0)	Price (p_k)	Quantity (q_k)
A	9	120	16	150
B	12	90	14	100
C	8	60	12	56
D	6	40	10	3O

(2×15=30)