22102236

QP CODE: 22102236

Reg No : .....

Name : .....

B.Sc DEGREE (CBCS) REGULAR / IMPROVEMENT / REAPPEARANCE EXAMINATIONS, JULY 2022

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

2D5FA5EC

Time: 3 Hours Max. Marks : 80

Part A

*Answer any **ten** questions.*

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

1. Define the term Statistics.
2. Define discrete data with an example.
3. Distinguish between class limits and class boundaries.
4. Mention any two situations where sampling only can be adopted.
5. Find the geometric mean and harmonic mean of the data 2, 6, 4, 7, 1.
6. Define weighted geometric mean.
7. Define harmonic mean and give the formula for obtaining harmonic mean from a grouped frequency table.
8. Define dispersion.
9. Define the moment measure of skewness.
10. Given the 2^{nd}, 3^{rd} and 4^{th} central moments as 50, 100 and 6600 respectively, obtain the measure of kurtosis.

11. Calculate simple AM index number from the following data.

Items	A	B	C	D
Price in 2010	20	40	30	50
Price in 2015	30	50	60	80

12. Define Laspeyre's Index number.

(10×2=20)

Part B

*Answer any **six** questions.*

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

13. What is meant by classification? Distinguish between chronological classification and geographical classification.

14. What are the main points to be remembered in tabulation?

15. Explain any two probability sampling methods.

16. Calculate arithmetic mean and mode for the data.

X	6	14	19	10	6
Frequency	8	10	15	5	2

17. Calculate mean deviation from the median for the following data.

X	5	8	13	20	25
Frequency	2	10	9	5	3

18. Construct the box plot for the following data. 74, 74, 75, 76, 79, 82, 83, 85, 87, 89, 90. Also mention the advantages of box plot.

19. Find the first four raw moments about origin of the data given below.

X	2	3	4	5	6
Frequency	1	3	7	4	1

20. Define index number. Mention its uses.

21. Define time reversal test. Examine whether simple AM and simple GM index numbers satisfy this test.

(6×5=30)

Part C

*Answer any **two** questions.*

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

22. (a) Define secondary data. Mention some sources of secondary data.
    (b) What are the main points to be remembered before using secondary data.

23. Calculate the range and quartile deviation for the following data.

Class	13-17	18-22	23-27	28-32	33-37	38-42	43-47
Freq.	5	15	28	24	17	10	1

24. Find the percentile measure of kurtosis .

Class	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80
Freq.	15	20	25	24	12	8	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)