18103707

QP CODE: 18103707

Reg No : .....

Name : .....

B.Sc. DEGREE (CBCS)EXAMINATION, JANUARY 2019

First Semester

Complementary - ST1CMT01 - STATISTICS - DESCRIPTIVE STATISTICS

(Common to B. Sc. Mathematics, B.Sc. Physics and B.Sc. ComputerApplications Programme)

2018 Admission only

35E20C10

Maximum Marks: 80 **Time: 3 Hours**

Part A

Answer any **ten** questions.

Each question carries **2** marks.

1. Mention any two disadvantages of direct personal investigation.
2. What do you mean by data classification?
3. Define continuous data with an example.
4. Distinguish between class limits and class interval.
5. Define median and give the formula for obtaining median from a grouped frequency table.
6. Mention any two advantages of quartile deviation.
7. Explain the effect of multiplying every obervation by a non zero constant k, on standard deviation.
8. Draw a box plot for the data 25, 17, 32, 55, 53, 60, 68, 58, 75, 83, 82, 90, 89, 92, 100.
9. Find out Pearson's coefficient of skewness if mean=58, median=62 and SD = 16.
10. Define moment measure of kurtosis.
11. Calculate simple GM index number from the following data

Items	A	B	C	D
Price in 1998	40	60	20	50
Price in 1999	50	60	30	70

12. Define time reversal test. Is it satisfied by simple GM index number?

(10×2=20)

Part B

Answer any **six** questions.

Each question carries **5** marks.

13. What are the limitations of Statistics?

14. Explain various scaling techniques in statistical analysis.

15. Explain systematic sampling and stratified sampling.

16. Define central tendency. What are the desirable properties of a good measure of central tendency?

17. Calculate median for the data.

Class	20-29	30-39	40-49	50-59	60-69	70-79	80-89
Freq.	3	16	42	50	31	6	2

18. Find mean deviation from median of the data

X	4	8	12	16	20	24
Freq.	2	7	15	11	9	6

19. The first four moments of a distribution about the value 4 of a variable are -1.5, 17, -30 and 108. Obtain the mean, variance, β_1 and β_2.

20. Explain the main steps in the construction of index numbers.

21. Define cost of living index numbers. Mention its uses.

(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 of the data.

Class	5-10	10-15	15-20	20-25	25-30	30-35	35-40
Freq.	5	10	12	20	13	8	2

24. Find the moment measure of skewness .

Class	30-34	35-39	40-44	45-49	50-54	55-59
Freq.	2	3	5	6	2	2

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

Items	Price (p_0)	Quantity (q_0)	Price (p_k)	Quantity (q_k)
A	6	50	10	60
B	4	100	6	120
C	10	60	12	75
D	8	30	14	35

(2×15=30)