23104649

QP CODE: 23104649

Reg No : .....

Name : .....

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

First Semester

B.Sc Mathematics Model II Computer Science

Complementary Course - ST1CMT61 - STATISTICS - DESCRIPTIVE STATISTICS

2017 Admission Onwards

96CE5793

Time: 3 Hours Max. Marks : 80

Part A

*Answer any **ten** questions.*

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

1. Define Random Sampling.
2. What is primary and secondary data?
3. Define Secondary Data.
4. Explain qualitative classification.
5. Write a note on pie diagram.
6. Define quartiles.
7. Define r^{th} raw moment of a set of observations.
8. If the first two raw moments of a data about 2 is 1 and 16, find the variance of the data.
9. When will you say a data is symmetric?
10. Distinguish between discrete and continuous sample space.
11. Define Statistical regularity.
12. State multiplication theorem of probabilty for three events.

(10×2=20)

Part B

*Answer any **six** questions.*

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

13. Explain scope of Statistics.

14. Explain stratified sampling. Compare it with simple random sampling.

15. Define the terms: Class interval, Class limits, Class boundaries and class marks.

16. Describe the importance of diagrammatic representation of data.

17. Calculate Mean for the following data.

Marks	0-10	10-20	20-30	30-40	40-50	50-60	60-70
No. of students	6	5	8	15	7	6	3

18. Derive the relationship between the r^{th} central moment and the raw moments.

19. What are different measures of skewness?Compare these measures.

20. Twelve bals are distributed at random among three boxes. What is the probability that the first box will contain 3 balls?

21. For any three evenits A, B and C, such that $B \subset C$ and $P(A) > 0$, show that $P(B/A) < P(C/A)$.

(6×5=30)

Part C

*Answer any **two** questions.*

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

22. Explain the guidelines are to be followed white constructing a questionnaire?

23. (I) Explain different types of ogives. How they are constructed?
(ii)Draw the ogives for the following data and find the median.

Marks	10-19	20-29	30-39	40-49	50-59
No. of students	5	10	18	12	6

24. (a) Explain kurtosis along with their different measures.

(b)Calculate measure of kurtosis

Class	0 - 14	15 - 29	30 - 44	45 - 59
Frequency	3	4	15	2

25. (a)State the total probability law. Hence prove Bayes' theorem.

(b)The probability that a female worker in an IT company is affected with vision problem is 0.07 and that for a male worker is 0.09. Out of 2000 workers in the company 800 females, one worker is selected at random and is found affected with vision problem. What is the probability that the worker is a male?

(2×15=30)