Code No: 50121/R19

# FACULTY OF SCIENCE

B.Sc. **CBCS** I-Year (I-Semester) Regular Examinations, Feb/Mar-2023

Statistics-I

**(Descriptive Statistics and Probability)**

Time: 3 Hours Max Marks: 80

## SECTION-A (4x5=20 Marks)

(Short Answer Type)

Answer any Four questions from the following

1. Define primary data and provide suitable examples.
2. Define Secondary data and where do we get this data.
3. Define Probability and Mutually exclusive.
4. Define conditional probability.
5. Define Probability Mass Function.
6. Explain real life examples of Continuous distribution.
7. How do you define raw moments?
8. Define Characteristic Function.

## SECTION-B (4x15=60 Marks)

(Essay Answer Type)

Answer the following questions

9. (a) What the various methods of collecting the data and how do you classify and tabulate the data?

(OR)

(b) Explain the various measures of central tendencies in detail.

10. (a) State and Prove Multiplication theorem for 'n' events.

(OR)

(b) State and prove Addition theorem for 'n' events.

11. (a) Define Random Variable and Properties of Bivariate distribution.

(OR)

(b) Discuss any two properties of Characteristic function.

12. (a) A random variable 'X' has the following probability function. Determine 'a' and Find P(X<3)

| Value's ofX | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|---|
| P(X) | a | 3a | 5a | 7a | 9a | 11a | 13a | 15a | 17a |

(OR)

(b) Discuss Cauchy Schwartz's inequality and discuss their applications.