Code No: 2034/R20

# FACULTY OF COMMERCE & BUSINESS MANAGEMENT

B.Com. (Business Analytics) **CBCS** I-Year (II-Semester) Regular Examinations, August-2023

**Data Analytics Essentials**

Time: 3 Hours Max Marks: 50

## SECTION-A (5x3=15 Marks)

Answer any Five questions from the following

1. Categorical Variables.
2. What is the key characteristic of a discrete variable?
3. What is Standard Deviation?
4. What is Range? Calculate the range of the dataset: 5, 10, 15, 20, 25
5. If two coins are flipped, what is the probability of getting at least one head?
6. How can the mean be calculated in terms of probabilities?
7. What is the role of distribution in data analytics?
8. What is Binomial Distribution?
9. Define vectors in R.
10. Explain scatter plot in R.

## SECTION-B (5x7=35 Marks)

Answer all the following questions

11. (a) Distinguish between continuous and discrete variables. Provide example of each and discuss their implications in data analysis.

**(OR)**

(b) Differentiate between nominal and ordinal variables. Provide examples of each and explain how they are used in data analysis.

12. (a) Discuss three components of central tendency and their importance in business analytics.

**(OR)**

(b) Analyze permutation with repetition and discuss its application in various scenarios. Explain the steps involved in calculating permutations with repetition.

13. (a) Explain the concept of Venn diagrams in probability. How can they be used to analyze exclusive and joint probabilities?

**(OR)**

(b) Explain Bayes' theorem and its significance in updating probabilities based on new information. Provide a step-by-step calculation of Bayes' theorem.

14. (a) Describe the process of calculating normal distributions in detail. Provide examples of when normal distributions would be most appropriate to use.

**(OR)**

(b) What is continuous distribution? How to identify continuous distributions and calculate continuous distributions?

15. (a) How do you use the Poisson Distribution function in R? Provide an example.

**(OR)**

(b) How do you create a box plot in R? Provide an example.