

# LNCT UNIVERSITY, BHOPAL

EnrolmentNo. \_\_\_\_\_

AL - 103 / AL- 203

B.TECH (AIML/DS) I SEMESTER

EXAMINATION [DEC-2024]

INTRODUCTION TO AI, DATA SCIENCE, ETHICS  
AND FOUNDATION OF DATA ANALYSIS

Maximum Marks:70

Time Allowed :3Hours

Note:-Attempt all questions. Internal choices are given.

## (SECTION -A)

### 1. Short Answer Type Questions (Attempt Any Five) [5x6=30]

- i) Explain Big data Eco system.
- ii) Differentiate between structured and unstructured data with examples.
- iii) What is exploratory data analysis, and how does it help in Data Science?
- iv) Define supervised and unsupervised learning with examples.
- v) What is the significance of clustering in Machine Learning?
- vi) Briefly explain the cognitive modeling approach in AI.
- vii) Define data visualization and its role in Data Analytics.

## (SECTION -B)

### 2. Long Answer Type Questions (Attempt Any Four) [4x10=40]

- i. Define Data Science and Big Data. Discuss the benefits and uses of Data Science and Big Data in modern industries.
- ii. What is data cleansing? Discuss the techniques used for correcting errors and why it is crucial in the Data Science workflow.
- iii. What is Machine Learning? Discuss its history, types, and applications in various domains.
- iv. Explain the techniques required to solve AI problems. Provide examples of their applications in real-world scenarios.
- v. Discuss the history of AI, focusing on key milestones and advancements.
- vi. Analyze the advantages and limitations of using Excel for data analysis compared to modern analytics tools.