24U329 (Pages: 2) Name : .....

Reg. No : .....

THIRD SEMESTER UG DEGREE EXAMINATION, NOVEMBER 2025

(FYUGP)

CC24UBCA3CJ203 - INTRODUCTION TO DATA SCIENCE

(Computer Application - Major Course)

(2024 Admission -Regular)

Time: 2.0 Hours Maximum: 70 Marks

Credit: 4

Part A (Short answer questions)

Answer ***all*** questions. Each question carries 3 marks.

1. Describe how does a data scientist differ from a data analyst. [Level:2] [CO1]
2. Explain data science life cycle. [Level:2] [CO1]
3. Explain the applications of data science in various industries. [Level:2] [CO1]
4. Explain what is the difference between supervised and unsupervised learning. [Level:2] [CO1]
5. Explain why data preprocessing is important. [Level:2] [CO2]
6. Explain in detail about histogram. [Level:3] [CO3]
7. Describe dimensions of descriptive statistics with example. [Level:3] [CO3]
8. State ant two differences between simple and multiple regression. [Level:2] [CO4]
9. Explain types of distributional plots. [Level:2] [CO4]
10. Explain in detail about model evaluation techniques with example. [Level:2] [CO4]

(Ceiling: 24 Marks)

Part B (Paragraph questions/Problem)

Answer ***all*** questions. Each question carries 6 marks.

11. Discuss the importance of data integration and data transformation. [Level:2] [CO2]
12. What are dimensionality reduction and its benefits? [Level:2] [CO2]
13. Explain Unstructured Data. [Level:2] [CO2]
14. Explain in detail about Pivot table. [Level:3] [CO3]
15. Illustrate how correlation statistics and pivot tables are used in data analytics. [Level:3] [CO3]

16. Summarize the evaluation metrics for supervised learning models. [Level:2] [CO4]

17. Evaluate the effectiveness of different cross-validation methods in model evaluation. [Level:2] [CO4]

18. Explain integration of prediction and decision making. [Level:2] [CO4]

(Ceiling: 36 Marks)

Part C (Essay questions)

Answer any ***one*** question. The question carries 10 marks.

19. Explain the concept of data cleaning and describe its importance in data analysis. [Level:2] [CO2]

20. Explain unsupervised learning techniques in brief. [Level:2] [CO4]

(1 × 10 = 10 Marks)

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