Final Page - Emerging Tech 1: Data Analytics

Programme: B.Tech (CSE)
Course Code: UGCS-209
Subject: Emerging Tech 1 - Data Analytics
Exam: End Term Examinations Jan 2025
Semester: Third
Time: 3 Hrs
Max. Marks: 50

INSTRUCTIONS TO CANDIDATES
1. SECTION–A is Compulsory carrying one mark each.
2. SECTION–B You have to attempt 4 questions carrying 5 marks each.
3. SECTION–C You have to attempt 2 questions each carrying 10 marks each.

Section A
Q1.
I. List the primary capabilities of Business Analytics.
II. Define OLTP.
III. List the tool used for Business Analytics.
IV. What are the key steps in data warehouse development?
V. What is Data Mining?
VI. Define a knowledge-based system.
VII. State the use of scorecards.
VIII. What is factor analysis?
IX. State when a bar chart should be used.
X. What is multidimensional scaling?

SECTION B
Q2. Examine how Big Data and Data Science are shaping the future of decision-making in business.
Q3. Explain the conceptual modeling of data warehouses. How does it support the data warehouse design process?
Q4. Describe the different OLAP server architectures and their advantages.
Q5. Explain market basket analysis and its significance in retail analytics.
Q6. Explain the layout and components of the Tableau workspace.
Q7. Discuss K-means grouping. What are its advantages?

SECTION C
Q8. Inspect the major tasks of Data Mining. How do these tasks align with the components of Data Mining methods?
Q9. Explain unsupervised learning with examples. How is it used in clustering and association tasks?
Q10. Describe the structure of Big Data and explain why standards are necessary for managing it effectively.