Tribhuvan University
Faculty of Humanities & Social Sciences
OFFICE OF THE DEAN
2024

Bachelor in Computer Applications
Course Title: Data Analysis and Visualization
Code No: CACS 455
Semester: VIII

Full Marks: 60
Pass Marks: 24
Time: 3 hours

Candidates are required to answer the questions in their own words as far as possible.

Group B

Attempt any SIX questions. [6×5 = 30]

2. What is visual data encoding? What are different visual encoding variables that can be considered for it? Explain with examples. [1+4]

3. Explain visualization reference model in detail. [5]

4. How multi-dimensional data can be visualized? How can we make multi-dimensional data visualization easier? Explain. [3+2]

5. How hierarchical structures can be used for data visualization? [5]

6. What is visual analytics? What are the challenges in it? Explain. [2+3]

7. What kind of dataset is Dow Jones Industrial Average dataset? What is its use in data analysis and visualization? [2+3]

8. Write short notes on:(Any two) [2.5+2.5]
   a) Detriot data set
   b) Isocontours
   c) Maps and its visualization

Group C

Attempt any TWO questions. [2×10 = 20]

9. What are the characteristics of time-series data? How can we visualized time-series data? Explain any three ways with examples. [4+6]

10. How hierarchical data can be visualized? Explain with proper examples. [10]

11. What is direct volume rendering? How it can be used in data visualization? Explain in detail. [2+8]