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21AD71

Seventh Semester B.E./B.Tech. Degree Examination, Dec.2024/Jan.2025
Data Visualization

Time: 3 hrs.

Max. Marks: 100

Note: Answer any FIVE full questions, choosing ONE full question from each module.

Module-1

1 a. Explain the importance of Data Visualization. (05 Marks)
  b. Explain the process of Data Wrangling. (07 Marks)
  c. Explain the various measures of Dispersion. (08 Marks)

OR

2 a. Explain indexing, slicing, splitting, sorting and combining operations in numpy with examples. (12 Marks)
  b. Explain the advantages and disadvantages of Pandas over numpy. (08 Marks)

Module-2

3 a. Explain distribution plots with neat diagrams. (10 Marks)
  b. Explain the following functions with examples: labels, titles, text, annotations and legends. (10 Marks)

OR

4 a. How can we create, close, display and save the figures? Explain with code snippet. (10 Marks)
  b. Explain the syntax and parameters of Piechart and Scatterplot in Matplotlib with examples. (10 Marks)

Module-3

5 a. Explain the types of color palettes with examples. (10 Marks)
  b. Explain the methods for customizing figure styles in seaborn with program code. (10 Marks)

OR

6 a. Explain kernel density estimation with code. (08 Marks)
  b. Explain despine( ) function with example. (06 Marks)
  c. Illustrate the Violin plots in seaborn. (06 Marks)

Module-4

7 a. Explain the architecture of Geoplotlib and also design principles of Geoplotlib. (10 Marks)
  b. Explain some basic gadgets with example. (10 Marks)

OR

8 a. Explain about Bokeh. Write its features. (06 Marks)
  b. Explain Bokeh server with neat diagram. (06 Marks)
  c. Explain Voronoi Tessellation and Delaunay triangulation with examples. (08 Marks)

Module-5

9 a. Explain socket and how socket connection can be established over TCP/IP connection.

(10 Marks)

b. What is JSON? Illustrate the concept of parsing JSON python code.

(10 Marks)

OR

10 a. Explain XML and the concept of parsing XML with python code.

(10 Marks)

b. Show a python program to parse the HTML with beautiful soup.

(10 Marks)

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