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Reg. No. : | | | | | | | | | | | | |

Question Paper Code : 10428

M.E./M.Tech.DEGREE EXAMINATIONS, APRIL/MAY 2023.

Elective

Big Data Analytics

CP 4092 – DATA VISUALIZATION TECHNIQUES

(Common to: M.E. Computer Science and Engineering/ M.E. Computer Science and Engineering (With Specialization in Artificial Intelligence and Machine Learning))

(Regulations 2021)

Time : Three hours Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. What is Data Preprocessing?
2. Define Scatter Plot.
3. List the Visualization Stages
4. What are visual variables in data visualization?
5. List any five Data Visualization Techniques.
6. What is line visualization?
7. What do you know about Interaction Techniques?
8. Define Interaction Control.
9. List the application by data visualization.
10. Write down the issues of system design evaluation.

PART B — (5 × 13 = 65 marks)

11. (a) What is data visualization and why is it important?

Or

(b) Explain the Visualization Process in detail.

12. (a) Write short notes on:

(i) Historical perspective. (6)

(ii) Eight Visual variables. (7)

Or

(b) Explain the usage of the Perceptual Process to Build Better Data Visualizations.

13. (a) Compare and Contrast between Spatial Data and GeoSpatial Data.

Or

(b) What is multivariate data in data visualization? Explain.

14. (a) How to Create Interactive Data Visualizations? Explain its Concepts and Techniques in detail.

Or

(b) List and explain any two examples of Interactive Data Visualization.

15. (a) What are the Steps in designing Visualizations? Elaborate.

Or

(b) What are the challenges of data visualization design? How to overcome that?

PART C — (1 × 15 = 15 marks)

16. (a) What is a primary focus of Gibson's theory of perceptual learning? Explain in detail with suitable examples.

Or

(b) Explain in detail about the problems you noticed while designing effective visualizations with suitable examples.