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

Question Paper Code : 50732

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

Fifth Semester

Civil Engineering

GI 8014 — GEOGRAPHIC INFORMATION SYSTEM

(Regulations 2017)

Time : Three hours Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. Define Geographical Information System GIS.
2. List any two open sources and proprietary GIS software each.
3. What is an ER Diagram in GIS.
4. List any four types of raster compression techniques in GIS.
5. State the purpose of map projection.
6. What are the three main types of projections?
7. Why interoperability is important in GIS?
8. List the any four-information available in metadata.
9. Mention the important components of map.
10. Mention the issues that will give inaccuracy in vector to raster conversion.

PART B — (5 × 13 = 65 marks)

11. (a) Describe the components of Geographical Information system with sketch.

Or

(b) Explain the types of attribute data with scales / levels of measurements.

12. (a) Discuss the Raster data structures with merits and demerits.

Or

(b) Explain the Vector data structures with merits and demerits.

13. (a) Discuss the importance to topology in GIS.

Or

(b) Explain the external database linking with attribute data and GPS data integration in GIS.

14. (a) Discuss the basic aspects of data quality in Geographical Information System.

Or

(b) Explain the Spatial Data Infrastructure (SDI) concepts and components.

15. (a) Discuss the map compilation procedure to print output map with graph, charts and multimedia information.

Or

(b) Compare and contrast Distributed GIS, Enterprise GIS and Desktop GIS.

PART C — (1 × 15 = 15 marks)

16. (a) How can vector data model be utilized for Highway road alignment studies using GIS.

Or

(b) Discuss the role of GIS in Environment Impact Assessment Studies (EIA) with the help of a case study.

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