Reg. No. : ☐☐☐☐☐☐☐☐☐☐☐☐☐

Question Paper Code : 40686

B.E./B.Tech. DEGREE EXAMINATIONS, NOVEMBER/DECEMBER 2021.

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 Geographic Information System (GIS).

2. List the common ways to express map scale.

3. List the reclassification methods in raster analysis.

4. What is the difference between polygon buffer and polygon setback?

5. What is geo-referencing?

6. What is local datum and global datum?

7. List the five dimensions geographic data quality.

8. What are metadata standards in GIS data Quality?

9. Why generalization is needed in GIS?

10. What is the difference between WebGIS and Desktop GIS?

PART B — (5 × 13 = 65 marks)

11. (a) Explain the components of Geographic Information System with neat sketch.

Or

(b) Discuss the polyconic projection with merits and demerits.

12. (a) Explain the Raster data structures with advantages and disadvantages.

Or

(b) Explain the vector data models with advantages and disadvantages.

13. (a) Discuss the concept of topological relationship in GIS with sketch.

Or

(b) Explain the non-spatial attribute data linking with external data bases.

14. (a) Discuss the evaluation of attribute accuracy with error matrix.

Or

(b) Explain the interoperability of GIS and Spatial data infrastructure.

15. (a) Discuss the basic elements of Map layout and its design considerations.

Or

(b) Explain the cartographic information products using multimedia techniques.

PART C — (1 × 15 = 15 marks)

16. (a) Discuss the implementation GIS technology in city planning.

Or

(b) Explain the Remote Sensing and GIS integration to watershed management.

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