

320676(20)

B. E. (Sixth Semester) Examination, April-May 2020

(New Scheme)

(Civil Engg. Branch)

GIS and its APPLICATIONS

Time Allowed : Three hours

Maximum Marks : 80

Minimum Pass Marks : 28

Note : Attempt all questions. Part (a) of each question is compulsory carrying 2 marks each. Solve any two parts from (b), (c), (d) of question 1, 2, 3.

Unit-I

- | | |
|--|---|
| 1. (a) Define GIS. | 2 |
| (b) Explain basic components of GIS. | 7 |
| (c) Explain, how data is organized in GIS. | 7 |

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- (d) Write short notes on : 7
- (i) GPS
 - (ii) GIS software

Unit-II

2. (a) Define digitization. 2
- (b) Differentiate vector and raster data. 7
- (c) Explain different data input techniques in GIS. 7
- (d) Write short notes on : 7
- (i) GIS data formats
 - (ii) Satellite data

Unit-III

3. (a) What is data layer. 2
- (b) Explain various data models used in GIS. 7
- (c) Explain spatial data analysis in GIS. 7
- (d) Write short notes on : 7
- (i) Run length encoding
 - (ii) Quadtree

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Unit-IV

4. (a) What is georeferencing. 2
- (b) Explain application of GIS in water resource engineering. 14

Or

- (c) Explain application of GIS in change detection. 14

Unit-V

5. (a) What is DEM? 2
- (b) Elaborate any GIS case study with following title : 14
- (i) Objective
 - (ii) Data required
 - (iii) Study area
 - (iv) GIS analysis tool
 - (v) Result
 - (vi) Conclusion