

SUBJECT CODE:- 273
FACULTY OF ENGINEERING AND TECHNOLOGY
B.E.(IT) Examination Nov/Dec 2015
Geographical Information System
(Revised)

[Time: Three Hours]**[Max. Marks: 80]**

"Please check whether you have got the right question paper."

- N.B i) Q.No.1 and Q.No.6 are compulsory.
ii) Solve any two questions from Q.2 to Q.5 in section A & any two questions from Q.7 to Q.10 in section B.
iii) Draw appropriate diagram wherever necessary.

Section A

Q.1	a) Explain how spatial data is used to represent the reality of the world into the computer. b) Explain how T/N model is practically created in Digital Terrain Modeling.	05 05
Q.2	a) Define scale. Explain the following terms with example. i) Ratio scale ii) Verbal scale iii) Graphical scale b) Explain the following raster data compaction techniques i) Run length encoding ii) Block encoding	07 08
Q.3	a) Explain the advantages & disadvantage of : i) Vector data structure ii) Raster data structure b) Explain the network data model w.r.t the following. i) Link impedance iii) Twin impedance ii) Stop & stops impedance	07 08
Q.4	a) Explain the challenges faced by GIS developers in modeling the third and fourth dimension each. b) Explain the following terms in brief in data editing. i) Rubber sheeting ii) Edge matching	07 08
Q.5	a) Explain the following concept in brief: i) Client –server web GIS ii) Networked web GIS b) Mention & explain in brief the various stages involved in constructing a GIS data model.	08 07

Section B

Q.6	a) Define the following data analysis terminologies i) Entity ii) Feature iii) Cell iv) Attribute v) Data layer b) Explain how visibility analysis is carried out during surface analysis.	05
Q.7	a) Explain how the distance & area are measured in GIS. b) Explain in brief the following interpolation methods. i) Local or Global ii) Exact or approximate iii) Gradual or Abrupt iii) Deterministic or stochastic	07 08
Q.8	a) Explain modeling of human processes w.r.t i) Spatial interaction model ii) Gravity model b) Explain the implementation of multicriteria evaluation (MCE) algorithm in GIS.	07 08
Q.9	a) Explain the following map design elements. i) Frame of reference ii) Projection used iii) The features to be mapped b) Explain the following forms of cartograms: i) Routed line cartogram ii) Control point linear cartogram iii) Area cartogram	08 07
Q.10	a) Define remote sensing. Explain the working of remote sensing with the help of diagram. b) Mention various applications of remote sensing & explain any two in brief.	08 07