

B.TECH.
THEORY EXAMINATION (SEM–VI) 2016-17
GEOGRAPHIC INFORMATION SYSTEM

Time : 3 Hours

Max. Marks : 100

Note : Be precise in your answer. In case of numerical problem assume data wherever not provided.

Section – A

- 1 Explain the following: (10 X 2 = 20)**
- a) What are different types of maps?
 - b) Explain the difference between attribute and spatial data. Give examples?
 - c) Define GIS as a Decision Support System?
 - d) State Euler equation?
 - e) List four trends in GIS technology?
 - f) What is the use of Nominal, Ordinal levels of measurement?
 - g) What do you mean by map projection?
 - h) Define Tessellation.
 - i) Write the characteristics of typical scanner used for creating Raster maps?
 - j) Why Normalization is required for databases? Also define ODBC.

Section – B

- 2 Attempt any five questions from the following: (10 X 5 = 50)**
- a) Explain various Projections used in Maps with their advantages and limitations?
 - b) Explain different sources of DEM used in GIS. Explain their applicability and limitations?
 - c) Differentiate between Gridded DEM and TIN DEM?
 - d) How GPS integration with GIS helps to improve efficiency of mapping?
 - e) What is GIS? Explain various components of GIS?
 - f) Explain about the geometry of Regular Tessellations?
 - g) Compare and contrast Vector and Raster data models used in GIS?
 - h) Describe various errors that may occur in digitization?

Section – C

Attempt any two questions from the following: (15 X 2 = 30)

- 3** Explain different Raster file formats used for data storage?
- 4** What are the functions of a Database Management Systems? Explain different database structures with their relative advantages?
- 5** Explain different levels of measurement for non spatial data with examples. Also differentiate between Digital Cartography and GIS?