Code No: 117GY

R13

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
B. Tech IV Year I Semester Examinations, November/December - 2017
REMOTE SENSING AND GIS
(Common to CE, CEE)

Time: 3 Hours

Max. Marks: 75

Note: This question paper contains two parts A and B.
Part A is compulsory which carries 25 marks. Answer all questions in Part A. Part B consists of 5 Units. Answer any one full question from each unit. Each question carries 10 marks and may have a, b, c as sub questions.

Part-A (25 Marks)

1.a) What is a Photo Mosaic? [2]
 b) What are the various types of Photo Mosaic? [3]
 c) What is a Polar Synchronous Satellite? [2]
 d) Give notes on Active sensors and Passive sensors used in remote sensing. [3]
 e) Explain the term 'Datum'. [2]
 f) What are the types of Spatial elements in GIS? [3]
 g) What is a 'Topology'? [2]
 h) How to define 'coverage' in Vector data format? [3]
 i) Define the term 'Grid' in a Raster data. [2]
 j) Explain 'on screen digitizing'. [3]

Part-B (50 Marks)

2.a) What is Relief displacement? How to measure Height from an aerial photo.
 b) Explain the parallax measurement using fiducial line over a stereopair images. [5+5]

OR

3.a) Explain the types of Aerial photographs and their use in photogrammetry.
 b) Explain 'Scale' based on the geometry of vertical aerial photograph. [6+4]

4.a) Explain the components of remote sensing with a neat sketch.
 b) Explain energy interactions with atmosphere. [5+5]

OR

5.a) Explain briefly the types of Resolutions of a Sensor used in Remote sensing
 b) List the Indian Satellite and Sensor resolution characteristics. [6+4]

6.a) Explain the types of Map projections with necessary diagrams.
 b) Compare Spatial data and Non Spatial data. [6+4]

OR

7.a) Compare Geographic Projected System with Projected Coordinate System.
 b) List and explain commonly used Map Projections along with its significance. [5+5]

8.a) Explain the Relationships among spatial elements in GIS.
  b) What are the advantages of Vector data formats over Raster data format? [6+4]

OR

9.a) Briefly explain Object based Vector Data model.
  b) What is a 'Shape file'? Explain its significance? [6+4]

10.a) What are the elements of Raster Data model? Explain.
  b) Explain the steps involved to integrate Raster data and Vector data. [6+4]

OR

11.a) Explain any two Raster data models used in GIS.
  b) What are the errors observed in the conversion of the data? [6+4]

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