R13

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
B. Tech IV Year I Semester Examinations, November/December - 2016
REMOTE SENSING AND GIS
(Civil Engineering)

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 Image parallax?   [2]
 b) Differentiate vertical and tilted photographs.   [3]
 c) What is false color composite?   [2]
 d) What are the advantages and limitations of Remote Sensing?   [3]
 e) What is Geospatial data?   [2]
 f) What are the different operations performed in GIS?   [3]
 g) What is coverage and nodes?   [2]
 h) What are the advantages of vector data over raster data?   [3]
 i) What is Scanning?   [2]
 j) Explain about IMGRID model.   [3]

PART-B
(50 Marks)

2.a) How will you calculate scale of a vertical photograph?
 b) Discuss stereoscopic neat model.   [5+5]

OR

3.a) Explain the basic geometric characteristics of a Aerial Photographs.
 b) Explain how will you measure height of an object using aerial photograph.   [5+5]

4.a) Illustrate the principal divisions of EM energy along with their wavelength ranges.
 b) Explain different types of resolutions involved in Remote Sensing? Give examples. [5+5]

OR

5.a) What are the different methods of data collection in Remote Sensing? Explain
 b) Describe interaction of radiation with the earth surface features.   [5+5]

6.a) What are the sub systems of GIS? Discuss the advantage of analysis sub system.
 b) Explain the process of joining spatial data with attribute data in GIS.   [5+5]

OR

7.a) What are the commonly used map projections in GIS? Explain the advantages.
 b) Describe the UTM Grid system.   [5+5]

8.a) What is topology? Describe with sketches, types of topology established based on entities.
   b) Discuss Spaghetti vector data model. [5+5]

OR

9.a) Explain GBF/DIME vector model.
   b) Explain brief about TIGER vector model.
   c) Discuss POLYVRT vector model. [4+2+4]

10.a) Explain how will you store physical features in raster format with examples.
   b) Explain run length encoding and raster chain method of data compression. [5+5]

OR

11.a) What are the different methods of data input in GIS?
   b) Discuss the various types of errors occur during digitization with sketches. [5+5]

--ooOoo--