

R15

Code No: 127GY

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD**B. Tech IV Year I Semester Examinations, November/December - 2018****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) Define Photo Scale and Map scale. [2]
- b) What are the types of Aerial Photographs? And explain any one in detail. [3]
- c) What is a Geo Synchronous Satellite? [2]
- d) What are the different types of sensors based on its platform? [3]
- e) What is a Projection? [2]
- f) Explain the significance of Attribute data in GIS. [3]
- g) How to represent a 'Point' in vector data format? [2]
- h) What are the elements of a Vector system? [3]
- i) What is a Metadata? [2]
- j) What is the importance of Source map in GIS? [3]

PART - B**(50 Marks)**

- 2.a) Explain the measurement of Height based on Relief displacement. [5+5]
 - b) What is stereoscopy? What is its application in Photogrammetry? [5+5]
- OR**
- 3.a) Explain the steps involved in measuring the height of an object from single -vertical aerial photograph. [5+5]
 - b) Explain parallax measurement over vertical photograph. [5+5]
- 4.a) List and explain the types of 'Scattering' observed in Earth's Atmosphere. [6+4]
 - b) Explain the significance of Electro-Magnetic bands in Remote Sensing. [6+4]
- OR**
- 5.a) Explain the Energy interactions with Earth surface features. [6+4]
 - b) What is a False Colour Composite? Explain its significance. [6+4]
- 6.a) What are the Components of Geographic Information System, explain them. [6+4]
 - b) Explain the procedure of inputting attribute data? How you will correct errors? [6+4]
- OR**
- 7.a) Explain various types of Map projections. [6+4]
 - b) How to create a link between Spatial data and Attribute data. [6+4]

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8.a) Give notes on Geometric representation of Spatial features in GIS.

b) Define 'Topology'. Explain its significance in GIS.

[5+5]

9.a) Explain two Vector data models used in GIS.

b) List out various spatial rules that define a Topology.

[5+5]

10.a) Explain the steps involved to integrate Raster data and Vector data.

b) What are the common errors observed in the creation of new data?

[6+4]

OR

11.a) Explain the types of Raster GIS models.

b) Explain various methods used for digitization to create spatial data.

[6+4]

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