Code No: 127GY **R15**

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.	
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.	
b)	Explain parallax measurement over vertical photograph.	[5+5]
4.a)	List and explain the types of 'Scattering' observed in Earth's Atmosphere.	
b)	Explain the significance of Electro-Magnetic bands in Remote Sensing.	[6+4]
	OR	
5.a)	Explain the Energy interactions with Earth surface features.	
b)	What is a False Colour Composite? Explain its significance.	[6+4]
6.a)	What are the Components of Geographic Information System, explain them.	
b)	Explain the procedure of inputting attribute data? How you will correct errors?	[6+4]
	OR	
7.a)	Explain various types of Map projections.	
b)	How to create a link between Spatial data and Attribute data.	[6+4]

8.a) Give notes on Geometric representation of Spatial features in GIS.
b) Define 'Topology'. Explain its significance in GIS. [5+5]

OR

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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