A **Reg. No. :** | | | | | | | | | | |

Question Paper Code: 59171

B.E. / B.Tech. DEGREE EXAMINATION, NOV 2019

Open elective

Computer Science and Engineering

15UCE971- REMOTE SENSING AND GIS

(Common to ECE, EEE, EIE, Mechanical, IT, Chemical)

(Regulation 2015)

Duration: Three hours Maximum: 100 Marks

Answer ALL Questions

PART A - (10 x 1 = 10 Marks)

1. Leaf reflectance depends primarily on: CO1- R

   (a) The pigments (b) internal cell structure

   (c) equivalent water content (d) All of these

2. A reduction of nitrogen nutrient in plants …. CO1- R

   (a) affects leaf colour (b) reduces pigment concentration

   (c) increase the visible reflectivity (d) All of these

3. The altitude of a Geo-stationary satellite from the earth surface is ……. CO2- R

   (a) 30,000 km (b) 36,000 km (c) 26,000 km (d) 44,000 km

4. A scanning system used to collect data over a variety of different wavelength ranges is called CO2- R

   (a) RADAR systems (b) Multispectral scanning

   (c) Microwave sensors (d) Active sensors

5. The arrangement of individual objects in distinctive nature is CO3- R

   (a) Pattern (b) Association (c) Texture (d) Tone

6. Drawing of boundaries around distinct regions of the image characterized by specific tones or texture is called CO3- R

(a) Association (b) Texture

(c) Tone (d) Delineation

7. The attributes refers to the properties of spatial entities is CO4- R

(a) Spatial data (b) Non spatial data (c) Complex data (d) Above the all

8. The graphical representation of the earth features is called CO4- R

(a) Scale (b) Map (c) Projection (d) None of these

9. ---------- is made up of pixels and also referred to as grid cells. CO5- R

(a) Spatial data (b) Raster data (c) Vector data (d) All the above

10. The 'boundary model' is sometimes also called CO5- R

(a) Topological data model (b) Temporal data model

(c) Topological discrete model (d) Temporal discrete model

PART – B (5 x 2= 10Marks)

11. Define remote sensing. CO1- R

12. What are the uses of weather satellite? CO2- U

13. Why is image classification necessary? CO3- U

14. What are the major components of GIS system? CO4- R

15. Mention the various fields of GIS application in resource management? CO5- R

PART – C (5 x 16= 80Marks)

16. (a) Explain the atmospheric interaction with electromagnetic radiation. CO1- U (16)

Or

(b) Explain the electromagnetic spectrum based on their wavelength with neat sketch. CO1- U (16)

17. (a) Describe the various types of resolutions of satellite imageries. CO2- U (16)

Or

(b) Explain the orbital and sensor characteristics of Indian remote sensing Satellites. CO2- U (16)

18.	(a)	What are the differences between supervised and unsupervised classification?	CO3-U	(16)
		Or		
	(b)	Briefly describe the techniques employed in digital image interpretation..	CO3-U	(16)
19.	(a)	Discuss about GIS data base file management..	CO4- U	(16)
		Or		
	(b)	Explain the details about different types of Map projection systems.	CO4- U	(16)
20.	(a)	Explain the data entry methods used in GIS.	CO5- U	(16)
		Or		
	(b)	What are the four basic procedures for inputting spatial data	CO5-U	(16)