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

Question Paper Code: 59171

B.E. / B.Tech. DEGREE EXAMINATION, MAY 2018

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. A perfectly black body CO1- R

   (a) is a diffuse emitter (b) absorbs all the radiations of every wave lengths

   (c) emits power of every wave length (d) all the above

2. Which one of the following relationship between the wave length (λ), and frequency and the speed (C) of the electromagnetic wave is correct? CO1- R

   (a) $C = v + \lambda$ (b) $C = v/\lambda$ (c) $C = v\lambda$ (d) $C = 1/ v\lambda$

3. The path followed by a satellite is referred to as CO2- R

   (a) Platform (b) Sensor (c) Orbit (d) None of these

4. The ability to separate and distinguish adjacent object is called CO2- R

   (a) Energy (b) Sensor (c) Resolution (d) Path

5. The lightness or darkness of a region within an image is known as CO3- R

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

6. _____refers various land forms with different size and shape. CO3- R

   (a) Geology (b) Topography (c) Topology (d) Erosion

7. The Refraction factor used to making a map is CO4- R

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

8. GIS deals with the which kind of data CO4- R

(a) Numeric data (b) Binary data (c) Spatial data (d) Complex data

9. The most commonly used method of automatic digitizing CO5- R

(a) Manual digitizing (b) Scanning (c) Printing (d) None of above

10. The most accurate method of digitizing is CO5- R

(a) Manual digitizing (b) Scanning (c) Printing (d) None of above

PART – B (5 x 2= 10Marks)

11. Define spectral signature curve. CO1- R

12. Differentiate active sensor and passive sensor. CO2- U

13. Enlist the elements of visual interpretation. CO3- U

14. Define spatial & Non-spatial data. CO4- R

15. Mention any two important methods of data input in GIS. CO5- R

PART – C (5 x 16= 80Marks)

16. (a) Explain the components of real Remote sensing System. CO1- U (16)

Or

(b) Describe the electromagnetic spectrum with neat sketch for remote sensing data. CO1- U (16)

17. (a) Give a detail specification and characteristics on meteorological satellites. CO2- U (16)

Or

(b) Discuss in details on air borne and space borne TIR. CO2- U (16)

18. (a) What are the interpretation keys and explain them with examples. CO3-U (16)

Or

(b) Explain detail about image enhancement techniques. CO3-U (16)

19. (a) Describe the fundamental projection classification of maps. CO4- U (16)

Or

(b) Explain the various components of GIS with an example. CO4- U (16)

20. (a) Explain the role of GIS in Highway alignment studies. CO5- U (16)

Or

(b) Explain how GIS can be utilized as a land information system. CO5-U (16)