C

Reg. No. :

B.E./B.Tech. DEGREE EXAMINATION, MAY 2024

Open elective

Computer Science Engineering

19UCE971-REMOTE SENSING & GIS

(Common to CSE,EEE, ECE, MECH, IT , Chemical, Agri and biomedical Engineering branches)

(Regulations 2019)

Duration: Three hours   Maximum: 100 Marks

Answer ALL Questions

PART A - (5x 1 = 5 Marks)

1. Which one of the following helps to identify the objects on the earth surface?   CO1- U

   (a) atmospheric window   (b) signature   (c) radiometric   (d)None of these

2. The reflection of solar energy is characterized by the water content in   CO1- U
   the leaf, in the reflective optical infrared:

   (a) visible (0.4 - 0.7 μm) region   (b) near-IR (0.7 - 1.3 μm) region

   (c) short wave-IR (1.3 - 2.7 μm) region   (d) None of these

3. In geographic coordinate system 1° at equator is equivalentto: CO1- U

   (a) 43   (b) 78   (c) 111   (d) 102

4. Vegetation with more chlorophyll will reflect more: CO1- U

   (a) Ultraviolet energy   (b) Emitted energy

   (c) near infra red   (d) Thermal infrared

5. In Hyperspectral remote sensing the EM Spectrumis: CO1- U

   (a) Continuous   (b) Discontinuous   (c) Discrete   (d) None of the above

PART – B (5 x 3= 15Marks)

6. Explain the spectral reflective characteristics of water, vegetation & soil — CO1 -U

7. Describe briefly about microwave remote sensing. — CO1 -U

8. Explain the spectacle noise in radar images. — CO1 -U

9. What are the various characteristics of map? — CO1 -U

10. What is Vectorization? — CO1- U

PART – C (5 x 16= 80 Marks)

11. (a) Explain about various wave length regions of remote sensing. — CO1- U — (16)

Or

(b) Explain briefly about the wave theory and its principles. — CO1- U — (16)

12. (a) Explain the context of sun synchronous and geosynchronous in detail. — CO1- U — (16)

Or

(b) Explain the context of active and passive sensors in detail. — CO1- U — (16)

13. (a) Interpret the concept of Digital image processing in detail. — CO3- App — (16)

Or

(b) Demonstrate the salient features of preprocessing in detail — CO3- App — (16)

14. (a) Explain the various map analysis in detail. — CO1- U — (16)

Or

(b) Explain the various methods for GIS interpretation. — CO1- U — (16)

15. (a) Interpret briefly about data input by digitization in GIS. — CO3- App — (16)

Or

(b) Construct the role of attribute data analysis. — CO3- App — (16)