



MARRI LAXMAN REDDY INSTITUTE OF TECHNOLOGY AND MANAGEMENT

(AN AUTONOMOUS INSTITUTION)

(Approved by AICTE, New Delhi & Affiliated to JNTUH, Hyderabad)

Accredited by NBA and NAAC with 'A' Grade & Recognized Under Section 2(f) & 12(B) of the UGC act, 1956

IV B.Tech I Sem Regular End Examination, Nov/Dec 2022

Remote Sensing & GIS

(EEE)

Time: 3 Hours.

Max. Marks: 70

Note: 1. Question paper consists: Part-A and Part-B.

2. In Part - A, answer all questions which carries 20 marks.

3. In Part - B, answer any one question from each unit.

Each question carries 10 marks and may have a, b as sub questions.

PART- A

(10*2 Marks = 20 Marks)

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|-------|--|----|-----|-----|
| 1. a) | What is meant by remote sensing? | 2M | C01 | BL1 |
| b) | What is active remote sensing? | 2M | C01 | BL1 |
| c) | Define Geo-coding. | 2M | C02 | BL1 |
| d) | What are the major GIS functions? | 2M | C02 | BL1 |
| e) | Define spatial data. | 2M | C03 | BL1 |
| f) | Where normalization of data is useful? | 2M | C03 | BL1 |
| g) | Give the limitations of keyboard entry method? | 2M | C04 | BL1 |
| h) | List the advantages of digitization of data? | 2M | C04 | BL1 |
| i) | What are the main challenges in developing GIS applications? | 2M | C05 | BL1 |
| j) | Name the six phases for GIS implementation? | 2M | C05 | BL1 |

PART- B

(10*5 Marks = 50 Marks)

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|------|---|----|-----|-----|
| 2 a) | Explain how electromagnetic spectrum is useful in Remote Sensing? | 5M | C01 | BL3 |
| b) | What are the Remote Sensing Platforms and write their applications? | 5M | C01 | BL3 |

OR

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|------|--|----|-----|-----|
| 3 a) | Explain how satellite orbits are designated and fixed? | 5M | C01 | BL3 |
| b) | Write an overview on IRS satellites and brief their specific applications? | 5M | C01 | BL2 |

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|------|---|----|-----|-----|
| 4 a) | What are the main components of GIS? Explain how they are interrelated? | 5M | C02 | BL1 |
| b) | What are the uses of GIS? | 5M | C02 | BL2 |

OR

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|------|--|----|-----|-----|
| 5 a) | Explain the steps involved in Geo-referencing? | 5M | C02 | BL4 |
| b) | Distinguish map and globe co-ordinate systems? | 5M | C02 | BL4 |

- 6 a) Explain the significance of entity-relationship model with their usage? 5M C03 BL4
b) Enumerate database structure models and explain any one? 5M C03 BL4
- OR**
- 7 a) What is raster data structure? Explain how it is different from vector data structure? 5M C03 BL2
b) What do you understand by database management system and state how it is useful with GIS? 5M C03 BL2
- 8 a) How data accuracy is decided? Explain with any two examples? 5M C04 BL2
b) How is a SDBMS different from a GIS ? Explain with an example? 5M C04 BL4
- OR**
- 9 a) What are sources of error in GIS and write their details? 5M C04 BL2
b) Write an overview on spatial data interpolation techniques? 5M C04 BL3
- 10 a) Explain how GIS can be used as a decision making toll for road network planning? 5M C05 BL3
b) What are the challenges associated with GIS for business applications? 5M C05 BL3
- OR**
- 11 a) Explain briefly how natural resources can be mapped by using remote sensing and GIS? 5M C05 BL3
b) Explain in steps how shortest path detection made using GIS? 5M C05 BL3

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CO-Course Outcome

BL - Blooms Taxonomy Levels