

R18

Code No: 157EZ

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

B. Tech IV Year I Semester Examinations, February - 2025

REMOTE SENSING AND GIS

(Common to EEE, CSE, IT, CSBS, CSIT, CE(SE), CSE(CS), CSE(AI&ML), CSE(DS), CSE(IOT), AI&DS, AI&ML)

Time: 3 Hours

Max.Marks:75

Note: i) Question paper consists of Part A, Part B.

ii) Part A is compulsory, which carries 25 marks. In Part A, Answer all questions.

iii) 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

(25 Marks)

- 1.a) Define active and passive remote sensing. [2]
- b) Briefly explain the resolutions involved in RS? [3]
- c) What is Geo-referencing? [2]
- d) What are the components of GIS? [3]
- e) What is Object Oriented GIS? [2]
- f) What is the difference between DEM and TIN [3]
- g) What is topology? [2]
- h) List the micro and macro components of accuracy. [3]
- i) What is multi criteria approach in GIS? [2]
- j) List the steps involved in Implementing a GIS. [3]

PART – B

(50 Marks)

- 2.a) What are the different Platforms available for RS data acquisition.
- b) Differentiate between Sun synchronous and Polar Orbits with Satellite examples. [5+5]

OR

- 3.a) What are the basic elements of Visual Image interpretation?
- b) What is Image Enhancement? Brief the different image enhancement techniques. [5+5]

- 4.a) What is Scale? Discuss the types of Scales and its representation.
- b) How you will represent real world features in Raster and Vector? [5+5]

OR

- 5.a) Discuss different types of data available for inputting into GIS.
- b) Discuss the need of Project Coordinate systems with examples. [5+5]

- 6.a) What are indexed files? Explain the advantages over order sequential files.
- b) What is a hierarchical data base structure? Explain how it works? [4+6]

OR

- 7.a) Differentiate between Raster and Vector data representation.
- b) Explain how Relational Database Management System works? [5+5]

QA QA QA QA QA QA QA G

- 8.a) What are the different methods of inputting data into GIS?
b) Explain the types of errors that occur during data input to GIS.

[5+5]

QA QA QA QA QA QA QA G

- 9.a) Discuss the network analysis with advantages.
b) What are buffers? Explain its utility with examples.

[5+5]

- 10.a) Explain how you will implement a GIS in Municipal Corporation?
b) Discuss major database design considerations towards system verification and validation.

[5+5]

QA QA QA QA QA QA QA G

- 11.a) Explain how RS & GIS will be useful in planning rural roads.
b) Discuss the application of GIS in Business.

[6+4]

---ooOoo---

QA QA QA QA QA QA QA G

QA QA QA QA QA QA QA G

QA QA QA QA QA QA QA G

QA QA QA QA QA QA QA G

QA QA QA QA QA QA QA G