

End Semester /Reappear (Semester VI) Examination May 2025

Programme: Diploma (MiE)
Course: Remote Sensing & Geo-Informatics
Course Code: 8D.352
Enrolment no. _____

Full Marks: 70
Time: 3 Hrs.

Section I

- 1. Short Answer type questions. Answer any four. 4 x 5 = 20**
- Explain the concept of remote sensing with proper sketch, Differentiate between active and passive remote sensing.
 - Enumerate various types of GIS software packages.
 - How do atmospheric conditions affect the microwave remote sensing?
 - Describe how GPS receivers calculate their positions based on the signals received from the satellites?
 - What do you mean by GIS? Write the significance of GIS in Mining engineering.
 - Explain image segmentation, also explain the term object detection.

Section II

- Long Answer type questions. Answer any three. 3 x 10 = 30**
- How does GIS support decision making in urban planning?
 - Interpret in your own words about the future of remote sensing in India.
 - Relate the difference between edge detection and image segmentation. What do you mean by Active microwave sensor and Passive microwave sensor?
 - Describe how remote sensing can be used to monitor and detect changes in mine environments. Justify your answer with proper examples.
 - Analyze the concept of spatial analysis in GIS.

Section III

- Application based questions. Answer any one. 1 x 20 = 20**
- Describe the use of Data acquisition in remote sensing and explain the importance of data acquisition.
 - How does any real-world applications where the similarity principle is used to improve edge detection performance? Analyse in own words.
 - Interpret your answer how can GPS be used in remote sensing for accurate geolocation of remote sensing data? Also explain the different components of GPS.
