



PRACTICE SET

End Semester Examination, Spring- 2026

Program: DIPLOMA

Semester: VI

Course: REMOTE SENSING & GEO-INFORMATICS

Course Code: 8D.383

Unit -1

Section: B (10 Marks questions)

1. Explain remote sensing with proper sketch, Differentiate between active and passive remote sensing.
2. Describe with a neat sketch, the seven components of remote sensing. Also explain the different segments of remote sensing.
3. Explain Digital image processing and explain the two main types of digital image.
4. Interpret in your own words about the future of remote sensing in India.
5. What do you mean by Data Acquisition? Write your views on the importance of data acquisition.
6. Explain the importance of image restoration in digital image processing with a proper example,

Section: C (20 Marks questions)

7. Explain the various stages of idealized remote sensing system.
8. Analyze the use of Data acquisition in remote sensing and explain the importance of data acquisition.

Unit -2

Section: B (10 Marks questions)

9. Explain microwave remote sensing and its importance.
10. How do atmospheric conditions affect the microwave remote sensing?
11. Articulate the limitations and advantages of Microwave Remote Sensing.
12. Explain similarity principle in image processing with the help of proper example.
13. Relate the difference between edge detection and image segmentation. What do you mean by Active microwave sensor and Passive microwave sensor?
14. Connect how does the human brain use the similarity principle to process edge information?

Section: C (20 Marks questions)

15. Explain image segmentation and the term object detection. List out some of the challenges that are associated with image segmentation.

16. Describe the complete procedure to extract the edges from an image with an example and proper diagram, if necessary.

Unit-3

Section: B (10 Marks questions)

17. Describe the common sources of errors in GPS positioning and how can they be mitigated?

18. Explain GPS, components of GPS and the use of GPS in present days.

19. Describe how remote sensing can be used to monitor and detect changes in mine environments. Justify your answer with proper examples.

20. Explain how GPS system work, and what role do satellites play in the process?

Section: C (20 Marks questions)

21. 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.

22. Discuss the various applications of GIS in different sectors.

Unit -4

Section: A (10 Marks questions)

23. What do you mean by GIS? Write the significance of GIS in Mining engineering.

24. How does GIS support decision making in urban planning?

25. Explain the main components of a GIS software and how do they interact with each other?

Section: B (20 Marks questions)

26. Analyze the concept of spatial analysis in GIS and explain its importance.

27. Write a brief note on: -

- a) Space segment.
- b) Control segment.
- c) User segment.
- d) Ionospheric and tropospheric delays.

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Disclaimer: - This is a Practice Paper. The Question in End term examination will differ from the Practice Paper. This Practice paper is meant for practice only.