24U3104 (Pages: 2) Name : .....

Reg. No : .....

THIRD SEMESTER UG DEGREE EXAMINATION, NOVEMBER 2025

(FYUGP)

CC24UGEL3MN201 - GEOINFORMATICS – III

(Geology - Minor Course)

(2024 Admission - Regular)

Time: 2.0 Hours Maximum: 70 Marks

Credit: 4

Part A (Short answer questions)

Answer ***all*** questions. Each question carries 3 marks.

1. State two key features of Real Aperture Radar (RAR). [Level:1] [CO2]
2. Describe the role of remote sensing in assessing crop damage after natural disasters. [Level:2] [CO3]
3. List two surface parameters that can be derived from a DEM. [Level:1] [CO5]
4. State the two main wavelength regions used for thermal infrared imagery. [Level:1] [CO1]
5. Describe the difference between vector overlay and raster overlay with examples. [Level:2] [CO5]
6. Explain how GIS-based LIS supports land ownership and property management. [Level:2] [CO5]
7. Explain how DEM is useful in terrain analysis. [Level:2] [CO3]
8. List two types of measurements that can be performed using GIS tools. [Level:1] [CO4]
9. Identify any two remote sensing techniques used in mineral exploration. [Level:1] [CO3]
10. List two engineering fields where GIS is commonly used. [Level:1] [CO5]

(Ceiling: 24 Marks)

Part B (Paragraph questions/Problem)

Answer ***all*** questions. Each question carries 6 marks.

11. Evaluate the impact of missing or inaccurate street data on network analysis results and suggest strategies to improve data reliability. [Level:4] [CO5]
12. Examine the factors that can influence the accuracy of water quality monitoring using satellite imagery and suggest ways to minimize errors. [Level:4] [CO3]
13. Define a database query and list the different types of queries commonly used in GIS databases. [Level:1] [CO4]

14. Explain the purpose of radiometric correction in satellite imagery and how it affects image quality. [Level:2] [CO2]

15. Describe the significance of LULC mapping in environmental planning and natural resource management. [Level:2] [CO3]

16. Explain how GIS can be used to monitor deforestation and habitat loss over time. [Level:2] [CO5]

17. Define network analysis in GIS and list the common types of network problems it can solve. [Level:1] [CO5]

18. Define Sea Surface Temperature (SST) and explain its importance in oceanographic studies. [Level:1] [CO3]

(Ceiling: 36 Marks)

Part C (Essay questions)

Answer any ***one*** question. The question carries 10 marks.

19. Outline the processes of image registration, enhancement, and filtering in digital image processing, and describe the purpose of each process. [Level:1] [CO2]

20. Define Database Management System (DBMS) and describe its role in storing, organizing, and managing spatial and non-spatial data in GIS. [Level:1] [CO4]

(1 × 10 = 10 Marks)

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