

M.Sc. DEGREE EXAMINATION, OCTOBER/NOVEMBER 2019.

THIRD SEMESTER

Geology

Paper V — ESSENTIALS OF REMOTE SENSING AND GIS FUNDAMENTALS

Maximum: 75 marks

Time : Three hours

(No additional sheet will be supplied)

PART A — $(5 \times 3 = 15 \text{ marks})$

Answer any FIVE questions. Each question carries 3 marks.

Each answer should not exceed 1 page.

- 1. Types of sensors.
- 2. Remote sensing platforms.
- 3. Components of GIS.
- 4. Explain the advantages of raster.
- 5. Stages of mineral exploration.
- 6. Stratigraphic guides.
- 7. Write the objectives of interpretation?
- 8. Google maps.

PART B — $(4 \times 15 = 60 \text{ marks})$

Answer ALL questions. Each question carries 15 marks.

Each answer should not exceed 6 page.

9. With a neat sketch explain basic components of an ideal remote sensing system.

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- 10. Describe the different digital image processing techniques used.
- 11. Explain how remote sensing and GIS techniques are used in water resources management and Monitoring.

 \mathbf{Or}

12. Explain about the different raster and vector data structure models and advantages of each one.

13. Define 'mineral association'. Explain how mineral association is used as a guide to ore search.

Or

- 14. Explain the rock alteration and geobotanical guides in mineral exploration.
- 15. Explain the role of Remote Sensing in environment management.

Or

16. Explain in detail basic elements of image interpretation.

