

[Time: 2.5 Hours]

[Marks: 75]

- N.B.:** 1) All questions are compulsory.
2) Figures to the right indicate full marks.
3) Use of map stencil is allowed.
4) Draw sketches, diagrams and maps wherever necessary.

1. A Elaborate supervised and unsupervised image classification. (15 Marks)
OR
1. B Explain remote sensing applications in urban planning. (15 Marks)
2. A Write a detailed note on 'hyper-spectral remote sensing'. (15 Marks)
OR
2. B Explain data processing and classification techniques for analyzing hyper-spectral data. (15 Marks)
3. A Discuss factors affecting quality of aerial photographs. (15 Marks)
OR
3. B Elaborate the concept and principles of photogrammetry. (15 Marks)
4. A Discuss the difference between visual image interpretation and digital image analysis. (15 Marks)
OR
4. B Discuss principles of thermal and microwave remote sensing. (15 Marks)
5. Write short notes on ANY THREE of the following. (15 Marks)
 - a) Remote sensing applications in soil resources
 - b) Types of aerial photographs
 - c) Visual Image Analysis
 - d) Microwave remote sensing
