

A-635

Total Pages : 3

Roll No.

GIS-505/DGIS-505/MGIS-505

ADVANCE REMOTE SENSING

(MAGIS/MSCGIS/DGIS/CGIS)

2nd Semester Examination, 2024 (June)

Time : 2:00 Hrs.

Max. Marks : 70

Note :- This paper is of Seventy (70) marks divided into Two (02) Sections 'A' and 'B'. Attempt the questions contained in these Sections according to the detailed instructions given therein. *Candidates should limit their answers to the questions on the given answer sheet. No additional (B) answer sheet will be issued.*

Section-A

Long Answer Type Questions 2×19=38

Note :- Section 'A' contains Five (05) Long-answer type questions of Nineteen (19) marks each. Learners are required to answer any *two* (02) questions only.

1. Describe the sensors and image characteristics of Indian Remote Sensing Satellite ResourceSat-1 (IRS-P6).

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2. What do you mean by thermal remote sensing ? Explain the characteristics and applications of the thermal remote sensing ?
3. Distinguish between multispectral and hyperspectral remote sensing and describe the characteristics of hyperspectral remote sensing data ?
4. What is Side Looking Airborne Radar (SLAR) ? Explain Real Aperture Radar (RAR) and synthetic Aperture Radar (SAR) ?
5. Explain how the factors such as surface roughness, geometrical and electrical characteristics affect the interaction between microwave and earth's surface ?

Section–B

Short Answer Type Questions 4×8=32

Note :- Section ‘B’ contains Eight (08) Short-answer type questions of Eight (08) marks each. Learners are required to answer any *four* (04) questions only.

1. What do you understand by atmospheric effects and atmospheric correction ? Describe the techniques of atmospheric corrections ?
2. Compare the principles of optical and thermal infrared remote sensing ?

3. Define hyperspectral data and its wavelength ranges in electromagnetic spectrum ?
4. Write note on the historical background of the microwave remote sensing ?
5. Analyze the responses and interactions of microwave on vegetation.
6. What do you mean by Radar Speckles ? Explain the techniques of reducing Radar Speckles.
7. What is image registration ? Explain image enhancement techniques.
8. Explain Image Subtraction and Image Division.
