C1070

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GIS-505/DGIS-505

Advance Remote Sensing

(MAGIS/MSCGIS/DGIS)

2nd Semester Examination, 2022 (June)

Time : 2 Hours] **Max. Marks : 80**

Note : This paper is of Eighty (80) marks divided into two (02) Sections A and B. Attempt the questions contained in these sections according to the detailed instructions given therein.

SECTION–A

(Long Answer Type Questions)

Note : Section 'A' contains Five (05) long answer type questions of Twenty (20) marks each. Learners are required to answer any Two (02) questions only.

(2×20=40)

1. Discuss the characteristics of remote sensing images obtained from the sensors of IRS P6? Explain the processes of Geometric correction.

2. What do you mean by the digital image processing (DIP)? Discuss various radiometric correction methods of DIP.

3. What is microwave remote sensing? Explain the reactions of microwave with earth surface and their corresponding effect in the radar image.

4. What do you mean by multispectral and hyperspectral data? Describe various characteristics of hyperspectral data. Explain the process of hyperspectral data interpretation.

5. What is image classification? Describe the importance of image classification in Remote Sensing. Distinguish between supervised and unsupervised methods of image classification.

SECTION–B

(Short Answer Type Questions)

Note : Section 'B' contains Eight (08) short answer type questions of Ten (10) marks each. Learners are required to answer any Four (04) questions only. (4×10=40)

1. What do you understand by colour composite? What are the advantages of using various colour compositions?

2. What is convolution filter? Discuss various convolution filters used in image enhancement.

3. What do you mean by image transformation? Discuss various image arithmetic operations for transformation.

4. Distinguish between active and passive microwave remote sensing. Briefly discuss spatial resolution of the radar system.

5. What are the relative merits and demerits of real aperture radar (RAR) and synthetic aperture radar (SAR)?

6. Explain the process of Thermal Infrared image interpretation.

7. What is digital image library? Explain briefly the techniques of hyperspectral image analysis.

8. Write short notes on any *two* of the followings :

(a) Image classification using an expert system.

(b) Accuracy assessment.

(c) Statistical or Histogram based clustering.

(d) Post-classification processing.
