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MGY-005

**POST GRADUATE DIPLOMA IN
GEOINFORMATICS**

Term-End Examination

June, 2024

**MGY-005 : TECHNIQUES IN REMOTE SENSING
AND DIGITAL IMAGE PROCESSING**

Time : 3 Hours

Maximum Marks : 75

Note : (i) *All questions are compulsory.*

(ii) *Marks for each question are indicated against it.*

(iii) *Draw well labelled diagrams, wherever necessary.*

1. Write short notes on any *four* of the following :

4×5=20

(a) Basic components of LIDAR

(b) Along track imaging system

P. T. O.

- (c) Image distortions
 - (d) Image filtering
 - (e) AI in image classification
 - (f) R-packages
 - (g) Functions used in data exploration.
2. (a) Describe principal component analysis and its importance. 10

Or

- (b) Discuss hardware components of a typical computer system.
3. (a) Describe unsupervised image classification technique and its advantages. 10

Or

- (b) Explain spatial resolution in radar images.
4. Give an account of basic data structure in R. 10
5. Describe the techniques of change detection applied for remote sensing images. 10

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6. (a) Discuss various univariate statistics with focus on the measures of central tendency, dispersion and distribution in the context of remote sensing images. 15

Or

- (b) Describe the types of aerial photographs based on direction of camera axis, combination style of aerial camera and angle of coverage.