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**MGY-005**

**POST GRADUATE DIPLOMA IN  
GEOINFORMATICS/  
M. SC. (GEOINFORMATICS)  
(PGDGI/MSCGI)  
Term-End Examination  
December, 2025**

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

*Time : 3 Hours*

*Maximum Marks : 75*

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***Note :** All questions are compulsory. Marks for each question are indicated against it. Draw well-labelled diagrams, whenever necessary to support your answers.*

1. Answer any *two* of the following questions :

2×10=20

- (a) What is Aerial Photography ? Discuss the projection characteristics of aerial photographs and also the equipments used for photogrammetrical measurements.
- (b) Discuss the methods of image fusion. Add a note on its significance.
- (c) Describe change detection techniques giving suitable examples.

2. Answer any *two* of the following questions :

2×10=20

- (a) Give an account of potential of R programming language for image analysis giving suitable examples. Add a note on the basic data type and data structure in R.

- (b) Discuss the systematic and non-systematic radiometric errors in remote sensing images.
- (c) Give an account of unsupervised image classification.
3. Write short notes on any *four* of the following : 4×5=20
- (a) Spatial resolution in RADAR images
- (b) Application of UAV based remote sensing
- (c) Multivariate statistics
- (d) Synthetic aperture radar
- (e) Contrast enhancement
- (f) Control structures in R

4. Discuss SRI, NDVI, SAVI, ARVI and NDSI band ratios and their significance. 15

*Or*

Give an account of hyperspectral remote sensing.

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