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MGY–005

POST GRADUATE DIPLOMA IN GEOINFORMATICS (PGDGI)

Term-End Examination

December, 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) Synthetic aperture radar

   (b) Imaging spectroscopy

   (c) Regression analysis

   (d) Image fusion

   (e) Change detection techniques

   (f) Signature evaluation

   (g) Generation of spectral profile in R

2. (a) Describe the types of aerial photography based on direction of camera axis, combination style of aerial cameras and angle of coverage. 15

Or

(b) Explain geometric errors and their corrections.

3. (a) Discuss application potential of LiDAR and UAV remote sensing. 10

Or

(b) What is accuracy assessment ? Write the major steps giving examples.

4. (a) What is image enhancement ? Discuss the methods used for the purpose. 10

Or

(b) Give an account of the basic data structures in R.

5. What is unsupervised classification ? Describe the steps and techniques used for the purpose. 10

6. Describe the commonly used programming languages for image analysis with emphasis on R. Also write its advantages and potential. 10

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