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**MGY-002**

**POST GRADUATE CERTIFICATE IN  
GEOINFORMATICS (PGCGI)**

**Term-End Examination**

**June, 2023**

**MGY-002 : REMOTE SENSING AND IMAGE  
INTERPRETATION**

*Time : 2 Hours*

*Maximum Marks : 50*

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

(ii) *The marks of each question are indicated against it.*

(iii) *Question Nos. 2 to 4 have internal choices.*

1. Answer all parts :

(a) Fill in the blank spaces with appropriate word(s) :  $4 \times 1 = 4$

(i) ..... is the process of extraction of qualitative and quantitative

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information of objects from aerial photographs or satellite images.

- (ii) The ratio of the electromagnetic energy reflected or diffused by a surface to the total incident energy is called .....
  - (iii) MSMR is an abbreviation of .....
  - (iv) ..... is the process of pixel-by-pixel correction of an image for topographic distortion.
- (b) State if the following statements are True (T) or False (F) : 3×1=3
- (i) Attenuation occurs mainly because of the scattering and absorption of light in atmosphere.
  - (ii) Field of View (FOV) is the total view angle of the camera that defines the swath.

(iii) NDVI can be calculated by applying the formula  $NDVI = (NIR + Red) / (NIR - Red)$ .

(c) Match the items given in Column A with those given in Column B :  $3 \times 1 = 3$

<b>Column-A</b>	<b>Column-B</b>
(i) Visible and NIR spectral bands	(1) Reflective Region
(ii) Radiant intensity	(2) Radiant Flux incident upon per unit area
(iii) Irradiance	(3) Radiant flux leaving a source per unit solid angle

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

$4 \times 5 = 20$

- (a) Across Track Scanners
- (b) Colour Composite
- (c) Error Matrix
- (d) Image interpretation keys

- (e) Landsat Mission
  - (f) ISODATA Clustering
3. What is spectral signature ? Elaborate spectral signature of water and soil. 10

*Or*

What is image resolution ? Describe the *four* types of image resolutions.

4. Describe the ground truth data with emphasis on any *four* sampling patterns. 10

*Or*

What is image enhancement ? Discuss the different contrast enhancement techniques.