MGY-002

POST GRADUATE CERTIFICATE IN GEOINFORMATICS (PGCGI)

Term-End Examination

June, 2022

MGY-002 : REMOTE SENSING AND IMAGE INTERPRETATION

Time : 2 hours *Maximum Marks : 50*

Note : ***All*** *questions are* ***compulsory****. Questions no. 2 to 4 have internal choices. Marks for each question are indicated against it.*

1. Answer ***all*** parts :

    (a) Fill in the blanks with appropriate word(s) : *4×1=4*

    (i) AVHRR is an abbreviation of _____.

    (ii) SPOT is an example of the satellite orbiting in _____ orbit.

    (iii) Passive microwave sensors are also known as _____, which are used to measure the energy emitted from the Earth's surface.

    (iv) MXL is an abbreviation of _____.

(b) State whether the following statements are *True (T)* or *False (F)* : 3×1=3

(i) The surface reflectance of soil at all visible wavelengths is reduced due to the presence of soil moisture.

(ii) Spatial autocorrelation is the likelihood of dissimilarity in measurements at one observation site to the others.

(iii) NDVI is a numerical index that uses visible and NIR bands of the electromagnetic spectrum.

(c) Match the items given in *Column A* with those given in *Column B* : 3×1=3

Column A	*Column B*
i. Point operation	1. Clustering algorithms
ii. OrbView	2. Contrast enhancement
iii. Unsupervised classification	3. GeoEye

2. Write short notes on any **four** of the following : 4×5=20

(a) Image Interpretation Tasks

(b) Electromagnetic Spectrum

(c) Error Matrix

(d) Spatial and Spectral Resolution

(e) True Colour Composite

(f) Cartosat

3. (a) What is sensor system ? Discuss in detail various types of scanning systems. *10*

OR

(b) What is ground truth data ? Describe the planning and collection of ground truth data. *10*

4. (a) Define Spectral Signature. Describe the spectral signature of water and soil. *10*

OR

(b) What is geometric correction ? Discuss the steps involved in the geometric correction process. *10*

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