Cluster Innovation Centre, University of Delhi, Delhi-110007

Examination : End Semester Examination – Nov-Dec 2022
Name of the Course : B. Tech (Information Technology and Mathematical Innovations)
Name of the Paper : An introduction to GIS & GPS
Paper Code : 32865953
Semester : V
Duration : 2 Hours
Maximum Marks : 60

Instructions: Attempt any five questions. All questions carry equal marks.

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1. Discuss the following:
    a. Spatial resolution.
    b. Spectral resolution

2. Describe the importance of spectral reflectance in satellite image processing. Discuss the spectral reflectance of water, vegetation and built-up land use land cover.

3. Describe the various form of Geographical information System (GIS) databases. Discuss the significance of satellite data in understanding environmental phenomenon e.g., Land use Land cover change.

4. Describe the various steps involved in the supervised classification. Briefly discuss the role of maximum likelihood classifier in supervised classification.

5. Discuss the following terms.
    a. Top of Atmospheric Spectral Radiance.
    b. Land Surface Emissivity.

6. How is Normalized Difference Vegetation Index (NDVI) is calculated? Discuss the significance of Normalized Difference Vegetation Index (NDVI) in assessing the Land Surface Temperature (LST).