M.Sc. 3rd Semester Examination-2022-23

GEOGRAPHY

Course ID : 31952   Course Code : GEO/302C

Course Title : Remote Sensing and GIS

Time : 2 Hours   *Full Marks :* 40

The figures in the right hand margin indicate full marks.
Candidates are required to give their answers in their
own words as far as practicable.

Answer *four* questions selecting at least *one* from each unit

UNIT-I (Basic Concept of Remote Sensing)

1. Briefly discuss the process of energy interaction in Remote Sensing. Explain any three advantages and disadvantages of Remote Sensing Data.   7+3

2. Write short notes on Thermal and Hyper-spectral remote sensing. Discuss the process of acquisition of aerial photography and generation of stereo images.   4+6

UNIT-II (Advanced remote sensing)

3. Discuss why satellite image preprocessing is required? Write about the sources of errors in satellite image data.

5+5

4. What are the uses of spatial filtering? Mention the various bands in different Landsat and IRS (Landsat 8) (LISS-III) images used in the equations to derive NDVI, EVI, GNDVI and the distinctions between these indices.

3+4+3

UNIT-III (GIS)

5. Write a note on different sources of GIS data. What is meant by data manipulation in GIS ? What is meant by datum and spheroid in the projection system ?   2+3+5

6. Explain the working principle of a GPS. Discuss the significance of transformation setting and its types in projections carried out in GIS software.   3+7

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