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3 (Sem-4/CBCS) GGY HC 3

2023

**GEOGRAPHY**

(Honours Core)

Paper : GGY-HC-4036

**(Remote Sensing, GIS and GPS)**

Full Marks : 60

Time : Three hours

***The figures in the margin indicate full marks for the questions.***

1. Answer the following questions :  $1 \times 7 = 7$ 
  - (a) What is meant by resolution of a sensor?
  - (b) Give the full form of ISRO.
  - (c) What is pixel?
  - (d) Name the radiation with longest wavelength in electromagnetic spectrum.

*Contd.*

- (e) Name *one* Indian remote sensing satellite.
- (f) How many satellites are used in GPS ?
- (g) Give an example of remote sensing platform.

2. Answer the following questions :  $2 \times 4 = 8$

- (a) What is georeferencing ?
- (b) What is photogrammetry ?
- (c) Give a reasonable definition of GIS.
- (d) What is Landsat ? Give *one* example.

3. Answer ***any three*** questions from the following :  $5 \times 3 = 15$

- (a) Explain the principle of aerial remote sensing.
- (b) What is buffer ? Why is buffer important for data interpretation in GIS ?
- (c) Analyse the technique of data layer extraction.

- (d) Distinguish between supervised and unsupervised data classification techniques.
- (e) Explain the structure and characteristics of vector data.

4. Answer **any three** questions from the following : 10×3=30

- (a) Discuss the development trend of satellite remote sensing in India.
- (b) Explain with examples the procedure and technique used in overlay analysis.
- (c) Present the history of development of GIS with examples.
- (d) Describe the characteristics of spatial and non-spatial data types and state how these are dealt with in Database Management System. 6+4=10
- (e) State how land resources are analysed using remote sensing.
- (f) Explain the procedure and technique of GPS survey with examples.