Total number of printed pages–3

14 (GGY–3) 3156 (GI)

2023

GEOGRAPHY

(Optional)

Paper : GGY–3156

(Geoinformatics)

Full Marks : 80

Time : Three hours

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

UNIT–I

(Remote Sensing)

Answer **Q. No. 1** and ***any two*** *other questions from the rest.*

1. What do you understand from the term 'remote sensing' ? What are the different types of remote sensing ? 16

Contd.

Or

What are the principles of energy radiation? How does energy interact in the atmosphere and with various features on the earth's surface ?

2. Write short notes on ***any two*** of the following : 4×2=8

   (i) Coordinate systems and UTM zones

   (ii) Sensors and platforms

   (iii) Tilt and relief displacement in aerial photographs

3. How would you classify aerial photographs ? 8

4. Compare and contrast the utility and applications of *any two* satellite data products from USA, ESA and/or India. 8

UNIT–II

(Geographic Information Systems)

Answer Q. No. **5** *and* ***any two*** *questions from the rest.*

5. What is a Geographic Information System ? What are its components and what are the relative importances of each of these components ? 16

6. What is a database and why is it important in a GIS ? 8

7. What do you understand by data input, storage and maintenance, data manipulation and data output ? 8

8. Does the integration of remote sensing data and GIS serve any purpose at all ? Provide real word examples to illustrate your contention. 8

UNIT–III

(Global Positioning System)

*Answer **any two** questions.*

9. For an urban planning exercise how would you put a drone or a GPS to use ? 8

10. What is the difference between a GPS and a DGPS ? Explain your answer in terms of errors and accuracy of *any one* of the two. 8

11. What are microsatellites ? Examine their applications in smart agriculture and environmental conservation. 8
