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6 SEM TDC GEOH (CBCS) C 14

2025

(May)

GEOLOGY

(Core)

Paper : C-14

(Remote Sensing and GIS and GPS)

Full Marks : 53

Pass Marks : 21

Time : 3 hours

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

UNIT—I

(Photogeology)

(Marks : 11)

1. How are aerial photographs taken? Mention the common errors occur while taking the aerial photographs. 3+3=6
2. Describe any *one* of the following : 5
 - (a) Elements of air photo interpretation in identifying fluvial and marine landforms

- (b) Relief displacement and vertical exaggeration

UNIT—II

(Remote Sensing)

(Marks : 17)

3. How does noise affect digital images and what methods are used to remove it?

7

Or

Explain digital elevation model (DEM). What are the common applications of digital elevation model?

4. What are TCC and FCC? How is FCC created and why is it used?

2+3=5

5. Write short notes on any two of the following :

2½×2=5

- (a) Raster and vector
- (b) Image enhancement
- (c) Spectral reflectance curve
- (d) Image ratioing

UNIT—III

(Geographic Information System)

(Marks : 16)

6. Fill in the blanks/Choose the most appropriate word : 1×5=5

- (a) GIS is used to capture, store, analyze and display ____ data.
- (b) ____ data represents geographic features using points, lines and polygons.
- (c) Satellite image is a ____ data.
- (d) Data used in the GIS is/are
 - (i) geospatial data
 - (ii) attribute data
 - (iii) geospatial data and attribute data
 - (iv) statistical data
- (e) Coordinate system that uses angular measurement from the origin to describe one's position is
 - (i) geographic coordinate system
 - (ii) cartesian coordinate system
 - (iii) projected coordinate system
 - (iv) rectangular coordinate system

(4)

7. What is coordinate system? Explain geographic coordinate system and projected coordinate system. 5

8. Write short notes on any *two* of the following : 3×2=6

(a) Components of GIS

(b) DEM analysis

(c) Datum

UNIT—IV

(GPS)

(Marks : 9)

9. What is GPS? How does it work? 5

Or

Write the full form of NavIC. How does it work?

10. How can GPS be integrated with GIS? 4

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