2023/TDC(CBCS)/EVEN/SEM/ GELSEC–601T/084

TDC (CBCS) Even Semester Exam., 2023

GEOLOGY

(6th Semester)

Course No. : GELSEC–601T

(Photogeology and Remote Sensing)

Full Marks : 50
_____
Pass Marks : 20

Time : 3 hours

The figures in the margin indicate full marks for the questions

SECTION—A

Answer any *fifteen* of the following questions :

$1 \times 15 = 15$

1. Define photogeology.

2. Name the orbits of the weather satellites and earth observation satellites.

3. Why are geosynchronous satellites called geostationary satellites?

(*Turn Over*)

4. Mention any two major differences between aerial photograph and a map.

5. What do you mean by geosynchronous orbit?

6. Define stereovision.

7. Write the abbreviations of MSS and LISS.

8. Name one foreign remote-sensing satellite.

9. Define vertical aerial photograph.

10. Write the bands used in LISS-I sensor.

11. Write the full form of RADAR.

12. Write the full form of GAGAN.

13. Name two GIS softwares.

14. What is DIP?

15. What is preprocessing?

16. What is geometric correction?

17. Write the full form of FCC.

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18. What is the full form of Landsat?

19. Name the image enhancement techniques.

20. What is temporal resolution?

SECTION—B

Write short notes on any *five* of the following :   2×5=10

21. Aerial photographs

22. Scale of aerial photograph

23. Components of remote sensing

24. Active and passive remote sensing

25. Sensors in IRS series of satellite

26. Geoconferencing

27. Pattern recognition

28. Spectral reflectance curve

29. Advantages of microwave remote sensing

30. Atmospheric window

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(4)

SECTION—C

Answer any *five* of the following questions : 5×5=25

31. Discuss the elements of photo-interpretation.

32. Write notes on the following : 2½+2½=5

    (a) Space borne platform

    (b) Indian remote-sensing satellite

33. Discuss the application of RS in geoscience.

34. Write notes on the following : 2½+2½=5

    (a) Landsat series of satellite

    (b) Microwave remote sensing

35. Write about the sensors used in Indian Remote-Sensing Satellite. Name the organization associated with the Space Mission in India. 4+1=5

36. Write notes on the following : 2½+2½=5

    (a) Product generation in GIS

    (b) Image classification

(5)

37. Write about the steps of DIP. Add a note on geometric correction. 5

38. Define GIS and the components of GIS. Write about the tools for map analysis. 3+2=5

39. Explain the following : 2½+2½=5

    (a) User segment of GIS

    (b) Integration of GIS with RS

40. Write notes on the following : 2½+2½=5

    (a) Geometry of aerial photograph

    (b) Electro-magnetic Spectrum (EMS)

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