



**2021/TDC/CBCS/ODD/
GELSEC-501T/134**

**TDC (CBCS) Odd Semester Exam., 2021
held in March, 2022**

GEOLOGY

(5th Semester)

Course No. : GELSEC-501T

(Geochemistry)

Full Marks : 50

Pass Marks : 20

Time : 3 hours

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

SECTION—A

Answer/Write on any *fifteen* of the following :

1×15=15

1. On what basis periodic table made?
2. What is the basis of ionic charges?
3. What are colloids?
4. Name one element of earth's crust.



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5. Write the composition of meteorites.
6. Define Jovian planets.
7. What is the basis of geochemical cycle?
8. What are radionuclides?
9. Name one trace element of igneous rock.
10. Define minor element.
11. Write one major element of igneous rock.
12. Define electronegativity.
13. Entropy
14. Solid solution
15. Basis of isotope geochemistry
16. Mechanism of thermodynamics
17. What is the basis of classifying meteorites?
18. What is the basis of biochemical classification of elements?

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(Continued)

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19. What is chondrule?

20. Define geochemical reservoir.

SECTION—B

Answer/Write on any five of the following: 2×5=10

21. Define geochemistry.
22. Define coordination number.
23. Write the composition of Mars.
24. Write a short note on terrestrial planets.
25. Write a short note on distribution of major elements in sedimentary rocks.
26. Write a short note on chemistry of metamorphic fluid.
27. Elements of geochemical thermodynamics
28. Laws of thermodynamics
29. Origin of meteorites
30. Asteroid belt

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(Turn Over)



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SECTION—C

Answer any *five* of the following questions : $5 \times 5 = 25$

31. Discuss the different types of chemical bond.
32. Write an explanatory note on crystal chemistry.
33. Write an explanatory note on cosmic abundance of elements.
34. Discuss the evolution of geochemical cycle.
35. Discuss the Goldschmidt's geochemical classification of elements.
36. Write a note on trace elements of metamorphic rocks.
37. Write an explanatory note on isomorphism.
38. Write an explanatory note on polymorphism.
39. Write a note on the geochemical structure of the earth.
40. Discuss briefly on the geochemical fractionation of trace elements in magmatic processes.
