



**2022/TDC(CBCS)/EVEN/SEM/
GELDSE-601T/253**

TDC (CBCS) Even Semester Exam., 2022

GEOLOGY

(6th Semester)

Course No. : GELDSE-601T

(Fuel Geology)

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* as directed : $1 \times 15 = 15$

1. Which coal is known as 'brown coal'?
2. Banding is developed in which type of coal?
3. Name the volatile components of coal.
4. Name the stages of coal formation.



(2)

5. CBM is found in coal seams of ____ depth.
(Fill in the blank)
6. Write the names of two UCG gases.
7. CBM is found in ____ stratigraphic horizons of India.
(Fill in the blank)
8. Write the stages of indirect liquefaction process.
9. Write the main components of petroleum.
10. Petroleum is derived from ____.
(Fill in the blank)
11. Name the latest international standard unit of calorific value.
12. The temperature of catagenesis is ____.
(Fill in the blank)
13. Name one reservoir rock.
14. Name one source rock.
15. Name the types of pores.

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(Continued)

(3)

16. What is a cap rock?
(Fill in the blank)
17. Atomic minerals are called ____.
(Fill in the blank)
18. Gas hydrates are composed of ____.
(Fill in the blank)
19. Thorium is found mainly in which part of India?
20. Name one nuclear power station of India.

SECTION—B

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

21. Vitrinite group
22. Non-volatile components of coal
23. Direct coal liquefaction (DCL)
24. Status of UCG in India
25. Types of kerogen
26. Diagenesis

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(Turn Over)



(4)

27. Petroleum system
28. Salt dome
29. Geological horizons of atomic minerals
30. Jaduguda uranium mining of Jharkhand

SECTION—C

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

31. Write about lithotype and micro-lithotype of coal.
32. Describe briefly on the fundamentals of coal petrology.
33. Describe coal bed methane (CBM) citing Indian examples.
34. Explain the basic principles of underground coal gasification (UCG).
35. Write an account on maturation of kerogen emphasizing its biogenic and thermal effect.
36. Describe the chemical composition of petroleum.

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(Continued)

(5)

37. Give a brief description on the types of kerogen.
38. Write briefly on the classification of hydro-carbon traps.
39. Write a note on the mode of occurrence of atomic minerals in nature.
40. What is gas hydrate? How far is it an alternate source of energy? Justify. 1+4=5

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