

Total Page - 7

UG/5th Sem/Geolo(H)/T/19

2019

B.Sc. (Honours)

5th Semester Examination

**GEOLOGY**

Paper - DSE-2T

Full Marks : 40

Time : 2 Hours

*The figures in the margin indicate full marks.  
Candidates are required to give their answers  
in their own words as far as practicable.*

**(Fuel Geology)**

**Group - A**

Answer any *five* questions from the following.

5×2=10

1. Which rock serves as the best source rock for petroleum generation ?
2. What are gas hydrates ?

*[ Turn Over ]*

( 2 )

3. What is durain ?
4. Define coke. Write its uses.
5. Name two nuclear fuels.
6. What do you mean by macerals ? Which maceral has highest reflectance ?
7. What is CBM ?
8. Mention the temperature ranges suitable for oil and gas generations respectively.

**Group - B**

Answer any *four* of the following questions.

4×5=20

9. Discuss evidences in favour of drift theory for the origin of Gondwana coal.
10. Classify hydrocarbon trap types with neat sketches.
11. Differentiate between Gondwana and Tertiary coal.

( 3 )

12. Write short note on petroleum occurrence at Bombay High.
13. Draw the Van-Krevelën diagram to show Kerogen maturity.
14. Write short note on Proximate Analysis of Coal.

**Group - C**

Answer any *one* of the following questions.

1×10=10

15. What are primary and secondary migration of petroleum ? Discuss the causes and problems involved in primary migration of petroleum. 2+8
  16. Write about the distribution and occurrence of Gondwana coals in India.
- 

[ Turn Over ]

( 4 )

(Evolution of Life Through Time)

Full Marks : 60

Time : 3 Hours

**Group - A**

Answer any *five* questions from the following.

10×2=20

1. Define index fossil with example.
2. Write the names of major mass extinction events.
3. Define adaptive radiation.
4. What do you mean by hypertely ?
5. Which animal and plant groups flourished during Mesozoic ?
6. What do you mean by evolutionary lineage ?
7. Differentiate between micro and macro-evolution.
8. What is pedomorphosis ?

( 5 )

9. Differentiate between *Homo erectus* and *Homo habilis*.
10. What are tetrapods ?
11. What are extremophiles ?
12. What do you mean by phylogenetic tree ?
13. Name two Precambrian macrofossils.
14. What do you mean by biomineralization ?
15. What is genetic drift ?

**Group - B**

Answer any *four* of the following questions :

4×5=20

16. Discuss different types of biozones with sketch.
17. Draw the evolutionary tree of vertebrates.
18. Write short note on Bryophyta.

[ Turn Over ]

( 6 )

19. (a) Write the differences between Saurischian and Ornithischian dinosaurs.
- (b) What are the causes of extinction of dinosaurs ?  
2+3
20. Write morphological differences between Chondrichthyes and Acanthodii class of fishes.
21. Write short note on various modes of evolution with neat sketches.

**Group - C**

Answer any *two* of the following questions.

2×10=20

22. Write a brief note on the evolutionary history of Hominiids.
23. Write down the geologic time scale showing the appearance of different life forms during different times in the Earth's history.
24. (a) Why abundance biozone cannot be used as a reliable method for chronostratigraphic correlation ? In what cases, can such correlation be done with certain reliability ?

( 7 )

(b) How and when did hoofed grazers evolve ?

3+3+4

25. How do terrestrial biosphere control global carbon cycle ? Describe Biomineralization and its applications. 5+5
-