R8353	Sub. Code
	464503

M.Sc. DEGREE EXAMINATION, APRIL – 2023

Fourth Semester

Applied Geology

ENGINEERING GEOLOGY, MINING GEOLOGY, ORE PROCESSING AND ENVIRONMENTAL GEOLOGY

(CBCS – 2019 onwards)

Time : 3 Hours Maximum : 75 Marks

Part A (10 × 2 = 20)

Answer **all** questions.

1. What is specific gravity of Rock?

2. Give any two rock types commonly using for road materials.

3. Define reservoir.

4. What is Overbreak of Tunnel?

5. Define Underground.

6. What is Grab sampling?

7. List any two ores of Iron.

8. Write any two ores of Aluminium.

9. What is mining lease?

10. Define off shore mining.

Part B (5 × 5 = 25)

Answer **all** questions, choosing either (a) or (b).

11. (a) Write short note on test for selecting rock sites for construction.

Or

(b) Illustrate the steps involved in testing of rocks in laboratory and fields.

12. (a) Explain the methods to identify suitable site for Tunnel construction.

Or

(b) Write short notes on the major types of Bridge and where it is required.

13. (a) Discuses about Mine Machineries and its advantages.

Or

(b) Explain Hydraulic Mining methods and its importance.

14. (a) Explain the screening principles of Electrostatic Separation.

Or

(b) Discuses about the Copper ore extraction methods.

15. (a) Explain the laws and regulation of Coastal Mining.

Or

(b) Illustrate Mining Hazards with examples.

Part C

$(3 \times 10 = 30)$

Answer any **three** questions.

16. Describe the various Physical and Engineering properties of Soil.

17. Write detail note on various type of Dam and its suitable site condition for construction.

18. Describe and distinguish surface, Alluvial and Granite mining methods.

19. Describe the various occurrence of Gold and procedure for extraction.

20. Write detailed note on Environmental impact and development of management plans of Mining project.

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R8354	Sub. Code 464504

M.Sc. DEGREE EXAMINATION, APRIL – 2023

Fourth Semester

Applied Geology

PETROLEUM GEOLOGY

(CBCS – 2019 onwards)

Time : 3 Hours Maximum : 75 Marks

Part A (10 × 2 = 20)

Answer **all** questions.

1. What is Hydrocarbon?

2. Write any two reservoir rocks of hydrocarbon.

3. What is reservoir pressure?

4. What are the main processing Seismic survey?

5. What is VSP data acquisition?

6. What is the reservoir rock?

7. What is source rock characterization?

8. What is Carbon Cycle?

9. What is well planning?

10. List any two drilling methods and its advantages.

Part B (5× 5 = 25)

Answer **all** questions, choosing either (a) or (b).

11. (a) Explain the generation, migration and accumulation of oil.

Or

(b) Discuss about the Structural and Stratigraphic traps of hydrocarbon.

12. (a) Write short note on the Recovery of Hydrocarbon and reservoir management.

Or

(b) Briefly discuses about the Source and effects of Heat energy in Hydrocarbon exploration.

13. (a) Explain the role of seismic data in hydrocarbon exploration.

Or

(b) Discuss about the application of Gravity and Magnetic Geophysical methods in hydrocarbon exploration.

14. (a) Explain the Organic matter accumulation and Hydrocarbon generation.

Or

(b) Write short note on the Geochemical methods for source rock characterization.

15. (a) Discuss about the classification and selection of drilling pits.

Or

(b) Explain the process involved in the monitoring of drilling wells.

Part C

$(3 \times 10 = 30)$

Answer any **three** questions.

16. Write a detail note on the Petroleum basin in India and its nature of occurrence.

17. Describe the Geothermal gradients and its Measurements.

18. Describe and distinguish between Seismic Refraction and Reflection method.

19. Discuss in detail about the origin, composition and structure of Organic matter.

20. Explain policy and project management of oil wells.

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