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## Fifth Semester B.E. Degree Examination, Feb./Mar. 2022

### Fundamentals of Petroleum Geology

Time: 3 hrs.

Max. Marks: 100

**Note: Answer any FIVE full questions, choosing ONE full question from each module.**

#### Module-1

- 1 a. Explain the history of Origin of Earth. (07 Marks)
- b. Explain the nature and properties of minerals and rocks. (13 Marks)

**OR**

- 2 a. Write about Sedimentary Environment. (10 Marks)
- b. Explain the following i) Stratigraphy ii) Geological time scale. (10 Marks)

#### Module-2

- 3 Explain Sedimentology of Petroleum Bearing sequences. (20 Marks)

**OR**

- 4 a. Explain the generation and migration of Petroleum. (10 Marks)
- b. Discuss the physical and chemical properties of Petroleum. (10 Marks)

#### Module-3

- 5 a. Explain subsurface environment for oil exploration. (10 Marks)
- b. Explain the formation of Fluids. (10 Marks)

**OR**

- 6 Write a note on : (20 Marks)
  - a. Traps and Seals.
  - b. Reservoir.
  - c. Generation and Migration of Fluid.
  - d. Composition of Fluid.

#### Module-4

- 7 a. Explain the exploration of oil with principles. (06 Marks)
- b. Explain about well drilling. (08 Marks)
- c. Write a note on Formation Evaluation. (06 Marks)

**OR**

- 8 a. Explain about Borehole Seismic and 4D Seismic. (14 Marks)
- b. Write a note on Subsurface geology. (06 Marks)

#### Module-5

- 9 a. Explain Non – Conventional Petroleum Resources. (06 Marks)
- b. Write about i) Plastic and Solid hydrocarbons ii) Tar sands. (14 Marks)

**OR**

- 10 Write a note on : (20 Marks)
  - a. Reserve Estimation
  - b. Oil and Gas Shales.
  - c. Coal Bed Methane
  - d. Assessment of Reserves.