

PARUL UNIVERSITY
FACULTY OF APPLIED SCIENCE
M.Sc., Winter2019-20 Examination

Semester: 3
Subject Code: 11211206
Subject Name: Petroleum and Coal Geology

Date: 07/12/2019
Time: 02:00 pm to 04:30 pm
Total Marks: 60

Instructions:

1. All questions are compulsory.
2. Figures to the right indicate full marks.
3. Make suitable assumptions wherever necessary.
4. Start new question on new page.

- Q.1. A) Essay type/ Brief note (4x2) (Each of 04 marks) (08)**
 (a) What is Petroleum? Explain the Origin of Petroleum.
 (b) What are Hydrocarbons? Explain the migration of Hydrocarbons.
- Q.1. B) Answer the following questions (Any two) (04)**
 (a) Short note/ Brief note (2x2)/ Schematically label the figures (2x2) (Each of 02 marks) (04)
 1. Define Oil Exploration methods.
 2. Explain Cap rock with Diagram.
 (b) What are traps. Describe its classification. (04)
 (c) Explain the mechanism of Traps. (04)
- Q.2. A) Answer the following questions. (04)**
 (a) Short note/ Brief note (2x2)/ Fill in the blanks. (Each of 02 marks) (04)
 1. What is Rig. Explain its components in detail.
 2. Explain the type of Rigs used in Onshore & Offshore drilling.
 (b). What is drilling. Explain its objective. (04)
- Q.2. B) Answer the following questions (Any two) (03)**
 (a) Short note/ Multiple choice questions. (Each of 01 marks) (03)
 1. Blow out
 2. Shell Problems
 3. Density of Mud is increased by using ?
 (b) What is drilling fluid. Explain its functions. (03)
 (c) Casing & Cementation (03)
- Q.3. A) Essay type/ Brief note (4x2) (Each of 04 marks) (08)**
 (a) What is Coring. How it is useful for a Geologist.
 (b) What is Logging. Explain their types & uses.
- Q.3. B) Answer the following questions (Any two) (04)**
 (a) Short note/ Brief note (2x2)/ Schematically label the figures (2x2)(Each of 02 marks) (04)
 1. Short note on Petroleum Geologist
 2. What is GTO. Who prepares the GTO
 (b). Explain Well Logging & Wire line logging (04)
 (c) Explain Porosity Logs & Nuclear logs (04)
- Q.4. A) Answer the following questions. (04)**
 (a) Short note/ Brief note (2x2)/ Fill in the blanks. (Each of 02 marks) (04)
 1. Diagenesis
 2. Catagenesis
 (b) Explain the formation of Coal with diagram. (04)
- Q.4. B) Answer the following questions (Any two) (03)**
 (a) Short note/ Multiple choice questions. (Each of 01 marks) (03)
 1. Use of Bentonite
 2. Use of Barites
 3. MWD means ?
 (b) Coal Mining (03)
 (c) Coal Bed Methane (03)