

Seat No: _____

Enrollment No: _____

PARUL UNIVERSITY
FACULTY OF ENGINEERING & TECHNOLOGY
B.Tech. Winter 2019 - 20 Examination

Semester: 3

Subject Code: 203120201

Subject Name: Introduction to Petroleum Geology

Date: 02/12/2019

Time: 2:00pm to 4:30pm

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 Objective Type Questions - (Fill in the blanks, one word answer, MCQ-not more than Five in case of MCQ) (All are compulsory) (Each of one mark) (15)

1. _____ are sedimentary rocks consisting of rounded fragments
2. _____ is fan-shaped deposit formed where a fast flowing stream flattens, slows, and spreads typically at the exit of a canyon onto a flatter plain

3. A fault that shows sidewise displacement of hanging wall is known as _____
4. _____ is the color of mineral powder
5. Igneous rocks are mainly composed of _____ minerals
6. _____ is the surface defined by connecting all hinge line
 - a) Hinge line
 - b) Axial plane
 - c) Limbs
 - d) Flanks

7. The set of processes transforming sediment into rock called
 - a) Hydrolysis
 - b) Lithification
 - c) Cementing
 - d) All of the above
8. Which of the following material has highest porosity
 - a) Clay
 - b) silt
 - c) Gravels
 - d) sandstone
9. Which type of sedimentary rock is the primary interest for reservoir?
 - a) Clastic rock
 - b) Organic rock
 - c) Both a and b
 - d) None of the above
10. A down thrown block bound by two normal faults inclined towards each other is called
 - a) Graben
 - b) Horst
 - c) Both a and b
 - d) None of the above
11. Describe lagoon depositional environment.
12. write any one difference between pyroxene and olivine mineral.
13. what do you mean by ductile behavior of rock?
14. what do you mean by joints?
15. give an example of low grade and high grade metamorphism.

- Q.2** Answer the following questions. (Attempt any three) **(15)**
- A) Explain following with diagram
- a) Dip and Strike
 - b) Hinge and Limbs of fold
- B) Write short notes on any three physical properties of mineral
- C) Describe Clastic and non-clastic sedimentary rocks
- D) Define faults, How it differs from joint?
- Q.3** A) Explain the concepts of Plate tectonics. Mention the types of plate boundaries. **(07)**
- B) Define folds. Explain Classification of folds on the basis of their Geometry. **(08)**
- OR**
- B) Write the difference between following **(08)**
- 1. Quartz and Feldspar
 - 2. Igneous and sedimentary rocks
 - 3. Dykes and Sills
 - 4. Shale and Sandstone
- Q.4** A) What do you mean by rock cycle? Explain it with the help of neat and clean diagram. **(07)**
- OR**
- A) What do you mean by Bowen's reaction series. Explain with the help of schematic diagram. **(07)**
- B) Give an outline classification of silicate minerals **(08)**