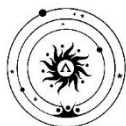


H.T.No: 

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Course Code: **241PT006**



# ADITYA UNIVERSITY

B.Tech – I Semester End Examinations Supplementary – APR 2025

## GEOLOGY & SEDIMENTOLOGY FOR PETROLEUM ENGINEERS (Petroleum Technology)

**Time: 3 hours**

**Max. Marks: 50**

**Answer ONE question from each unit**

**All Questions Carry Equal Marks**

**All parts of the questions must be answered at one place only**

### UNIT-I

- 1 a Explain the Earth's crust, mantle, and core with neat sketch. L2 CO1 [5M]  
b Explain the role of Biosphere in earth cycle. L2 CO1 [5M]

**(OR)**

- 2 a What are the different types of plate boundaries and the geological features associated with each? L2 CO1 [5M]  
b Explain the method in brief to determine the age of Earth. L2 CO1 [5M]

### UNIT-II

- 3 a What tools are commonly used to measure strike and dip? Explain any two in brief. L2 CO2 [5M]  
b How are folds classified based on their geometry and orientation? L2 CO2 [5M]

**(OR)**

- 4 a How can unconformities be identified in the field? Describe any one in detail. L2 CO2 [5M]  
b What is the importance of cross-sections in geological mapping? L2 CO2 [5M]

### UNIT-III

- 5 a Explain the role of sediments in chemical weathering processes L2 CO3 [5M]  
b How do sediments transition into sedimentary rocks over time? L2 CO3 [5M]

**(OR)**

- 6 a Explain the factors responsible for the formation of bedforms. L2 CO3 [5M]  
b How can paleocurrent data be used to infer the direction of ancient river systems? L2 CO3 [5M]

### UNIT-IV

- 7 a How do compaction and cementation contribute to the diagenesis of siliciclastic sediments? L2 CO4 [5M]  
b Classify sedimentary rocks based on grain size and composition. L2 CO4 [5M]

**(OR)**

- 8 a What are the main factors controlling the formation of sedimentary basins? Discuss in brief. L2 CO4 [5M]  
b Explain depositional characteristics of deep marine environments. L2 CO4 [5M]

**(P.T.O)**

## UNIT-V

- 9 a Explain the process of fossilization through carbonization. L2 CO5 [5M]  
b Explain the role of microfossils in understanding past environmental conditions. L2 CO5 [5M]

**(OR)**

- 10 a Why are index fossils important for the geological time scale? L2 CO5 [5M]  
b Explain the role of biostratigraphy in oil exploration. L2 CO5 [5M]

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