

H.T.No:

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Course Code: 241PT006



ADITYA UNIVERSITY

B.Tech – I Semester End Examinations Regular – Dec 2024

**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

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|---|---|--|----|-----|------|
| 1 | a | Explain different layers of Earth's Interior. | L2 | CO1 | [5M] |
| | b | What is the lithosphere and how does it interact with other spheres? | L2 | CO1 | [5M] |

(OR)

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|---|---|---|----|-----|------|
| 2 | a | What are the main theories regarding the origin of the Earth? Discuss in brief. | L2 | CO1 | [5M] |
| | b | Explain the theory of plate tectonics in brief. | L2 | CO1 | [5M] |

UNIT-II

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|---|---|---|----|-----|------|
| 3 | a | Compare between strike and dip in geological terms | L2 | CO2 | [5M] |
| | b | Describe the main factors that influence the deformation of rocks | L2 | CO2 | [5M] |

(OR)

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|---|---|---|----|-----|------|
| 4 | a | Describe the different types of folds found in rocks with neat diagram. | L2 | CO2 | [5M] |
| | b | What are the common symbols used in geological maps and what do they represent? | L2 | CO2 | [5M] |

UNIT-III

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|---|---|--|----|-----|------|
| 5 | a | Compare between physical and chemical weathering. | L2 | CO3 | [5M] |
| | b | Describe the importance of particle shape and sorting in sedimentary textures. | L2 | CO3 | [5M] |

(OR)

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|---|---|--|----|-----|------|
| 6 | a | What are the different types of stratification found in sedimentary rocks? Discuss in brief. | L2 | CO3 | [5M] |
| | b | What methods are used to determine paleocurrent directions in sedimentary rocks? | L2 | CO3 | [5M] |

UNIT-IV

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|---|---|--|----|-----|------|
| 7 | a | Explain main processes involved in the diagenesis of siliciclastic sediment. | L2 | CO4 | [5M] |
| | b | How are arenaceous sedimentary rocks classified and what are their typical features? | L2 | CO4 | [5M] |

(OR)

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|---|---|--|----|-----|------|
| 8 | a | Explain the diagenetic processes that affect carbonate sedimentary rocks | L2 | CO4 | [5M] |
| | b | Explain key features of shallow marine environments such as tidal flats and deltas | L2 | CO4 | [5M] |

UNIT-V

- 9 a What are the different modes of fossil preservation and how do they occur? L2 CO5 [5M]
b Explain the use of fossils to determine the relative age of rock layers. L2 CO5 [5M]

(OR)

- 10 a Explain how index fossils assist in identifying potential oil-bearing strata. L2 CO5 [5M]
b Describe characteristics, which make a fossil a good index fossil. L2 CO5 [5M]
