

2026
(Regular)
Geology (Core)
Paper Code : GL-CE-4234
Paper Name : Sedimentology

Time : 2 hours

Full Marks : 45

The figures in the margin indicate full marks for the questions.

1. Choose the correct option : 1×4=4
- a) Which of the following is the primary mineral component of a "Lithic Arenite" ?
- i) Over 95% Quartz
 - ii) Primarily Feldspar
 - iii) Significant rock fragments
 - iv) Pure Calcium Carbonate
- b) The transformation of loose sediment into solid rock through compaction and cementation is known as :
- i) Diagenesis
 - ii) Metasomatism
 - iii) Hydration
 - iv) Hydrolysis
- c) Symmetrical ripple marks are most commonly an indicator of:
- i) Unidirectional river flow
 - ii) Wind-blown dunes
 - iii) Bidirectional wave action (oscillatory flow)
 - iv) Glacial transport
- d) Which of the following is a non-clastic sedimentary rock ?
- i) Limestone
 - ii) Sandstone
 - iii) Gypsum
 - iv) Coal

Contd.

2. Write brief answers to the following questions : 2×3=6
- a) Write your concept on saltation & suspension.
 - b) What is trace fossil ? Give an example.
 - c) What do you mean by sedimentary flux ?
3. Write notes on **any three** of the following : 5×3=15
- a) Provenance.
 - b) Laminar vs. turbulent flow.
 - c) Dolomite & dolomitization.
 - d) Lithofacies assemblages.
 - e) Sedimentary environment.
 - f) Classification of limestone.
4. Answer **any two** of the following : 10×2=20
- a) What is sediment granulometry ? Discuss in brief about different grain size scales. Which technique would you use for coarse gravel and which for fine clay ? 1+7+2=10
 - b) Describe in brief about the mechanisms of sediment transport and deposition in different environments. Mention the fundamental characteristics of the continental and lacustrine sedimentary environment. 7+3=10
 - c) Explain classification of sedimentary rocks with suitable example of each class. 10
 - d) What is sandstone ? Discuss about the composition and types of sandstone. 1+2+7=10

