

M.Sc. Sem.-4 Examination

509

Geology

April-2025

Time : 2-30 Hours]

[Max. Marks : 70

Instructions: (i) Draw neat diagrams whenever necessary.
(ii) Write proper answer number.

Q-1. Describe the classification of sedimentary rocks based on grain size and composition. (14)

OR

Q-1. (a) Folk's classification of limestone. (07)

(b) Distinguish between clastic, chemical, and organic sedimentary rocks. (07)

Q-2. Write detailed note on erosional and biogenic sedimentary structures. (14)

OR

Q-2. (a) Glacial sedimentary system. (07)

(b) Continental shelf environment. (07)

Q-3. Explain the concept of diagenesis and its significance in sedimentary petrology. (14)

OR

Q-3. (a) Diagenesis of clay minerals and mudstone. (07)

(b) Interpretation of limestone cement. (07)

Q-4. Write an explanatory note on evolution of sedimentary basins with examples. (14)

OR

Q-4. (a) Geosyncline concept in sedimentation. (07)

(b) Sandstone composition and tectonic control. (07)

Q-5. Answer any seven short questions out of twelve. (14)

(i) Define orthoquartzite and texturally super-mature sandstone.

(ii) Mention two names of diagenetic derivatives of pyroclastic deposits.

(iii) Which type of deposits is formed due to rock falls on continental slopes?

(iv) Define with diagrams: Mud crack and rain print.

(v) Draw a sketch of Bouma sequence.

(vi) State two names of post-depositional sedimentary structures.

(vii) Define sedimentary differentiation.

(viii) What are rhythms and cyclothems?

(ix) Give two typical characteristics of sediments of glacial environment.

(x) What is the effect of upheaval on sedimentation?

(xi) What is rate of sedimentation in Mio geosyncline?

(xii) Mention the significance of climate on sedimentation.