2026

Geology (Core)

Paper Code : GL-CE-6324

Paper Name : Geology of Northeast India

Time : 2 hours ***Full Marks : 50***

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

1. Choose the correct option : 1×4=4

a) The river beyond which the Himalaya bends sharply to the south and spread along the eastern boundary of India ?

i) Dhansiri

ii) Indus

iii) Dihang (Brahmaputra)

iv) Tista

b) The Barapani-Tyrsad Shear Zone (BTSZ) is primarily considered as a -

i) N-S trending normal fault

ii) E-W trending thrust fault

iii) NE-SW trending left-lateral slip fault

iv) NW-SE trending right-lateral slip fault

c) A sequence of high grade metasediments restites, associated with the Lohit Granitoid Complex in the Dibang velley of Arunachal Pradesh is designated as -

i) Yamme Formation

ii) Yang Sang Chu Formation

iii) Etalin Formation

iv) Bhareli Formation

d) The first geothermal production well of NE India was drilled at -

i) Dirang in the West Kameng district of Arunachal Pradesh

ii) Dibang, Dibang valley district of Arunachal Pradesh

iii) Tezu Lohit district of Arunachal Pradesh

iv) Mayudiya, Dibang valley district of Arunachal Pradesh

2. Answer the following questions : 2×3=6

a) Name the oil fields of Barail group.

b) Write the lithological features of Lohit Granitoid Complex.

c) Write about the location and significance of uranium deposit in NE India.

3. Write notes on ***any two*** of the followings : 5×2=10

a) Coal fields of NE India.

b) Hydrothermal energy potential in NE India.

c) Geotectonic significance of Naga Schuppen Belt.

d) Paleozoics of Arunachal Pradesh.

4. Answer ***any three*** of the followings : 10×3=30

a) What is the geological age of the Naga Hill Ophiolite ? Why is it designated as National Geo-heritage Monument of India? Give an account on its lithology and tectonic significance. 1+2+7=10

b) Name the Group that represents Proterozoic sedimentary cover sequence that unconformably overlies the Archaean-Paleoproterozoic Gneissic Complex in Meghalaya. Discuss the Precambrian stratigraphy of Shillong plateau in the light of lithology, tectonic activity, igneous activity and economic importance. 1+9=10

c) Write short notes on the following : 5+5=10

i) Carbonatites of NE India

ii) Sillimanite deposits of NE India

d) What is the economic and operational significance of geothermal energy ? Give an account on significant geothermal energy potential of NE India. 3+7=10

e) Write short notes on the following : 5+5=10

i) Tertiary lithostratigraphy of upper Assam

ii) Tectonostratigraphy of the Trans-Himalayan belt in Arunachal Pradesh

f) Name the fault that seperates Mikir massif from Meghalaya massif of Shillong Plateau. Give an account on the fault system of Meghalaya with suitable sketches. 1+9=10

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