

Ex/SC/GEOL/PG/CORE/TH/13/2022

M. Sc. (APPLIED GEOLOGY) EXAMINATION, 2022

(2nd Year, 2nd Semester)

STRATIGRAPHY

PAPER – CORE/TH/13

Time : Two hours

Full Marks : 40

(Use a separate Answer script for each Part)

PART I (20 Marks)

(Phanerozoic Stratigraphy)

1. A) Answer *any three* : 3×3
- i) How do you explain initiation of the Gondwana sedimentation under glacial influence in the global context?
 - ii) What are the evidences of continental sedimentation in India during the Neocomian time?
 - iii) Discuss the significance of magmatism in the perspective of migration of India from Southern hemisphere.
 - iv) What tectono-climatic and vegetal changes were witnessed in India during the Miocene? State reasons for these changes.
 - v) How does the exotic facies in the extra Peninsular India differ from the Tethyan facies?

[Turn over

[2]

2. Answer **any three** : 2×3
- i) What is the type section of Triassic in Extra-Peninsular India? Fix the limit of the Passage Beds in between Ladinic and Carnic stages.
 - ii) Which period of human culture coincides with the fourth glacial phase of Pleistocene period and name the equivalent glacial phase of west Europe.
 - iii) Frame the outline of the course of events that led to beach formation in the Muth quartzite.
 - iv) Write a short note on the Palaeozoic marine transgression in Peninsular India.
 - v) Name the units from Australia and South Africa which are equivalent to Panchet Series.
3. a) “Assam gulf during the Cenozoic had been a prograding delta that occasionally underwent marine submergence” – substantiate with evidences.
- b) Show that the Eocene Epoch witnessed a widespread marine transgression followed by a regression in the Bengal basin. 5

Or

Discuss the Albian-Danian sedimentation pattern along the east coast of India adding a note on termination of Gondwana sedimentation in that area.

[3]

PART II (20 Marks)

(Precambrian Stratigraphy)

4. Answer **any one** : 8
- a) What is the significance of Archean greenstone belt? Why it is less prominent during Proterozoic time?
- Or**
- b) What is Grenville orogeny? Discuss its significance with special reference to India.
6. Write short notes on (**any three**) : 3×4=12
- a) Archean-Proterozoic boundary
 - b) Pan-African Orogeny
 - c) Purana basins
 - d) Banded Iron Formation
 - e) Komatiites