

M.Sc Sem-3 Examination

502

Geology

Time : 2-30 Hours]

November-2024

[Max. Marks : 70

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

Q-1. Explain development and scope of geochemistry. Add a note on cosmic abundance of elements. (14)

OR

Q-1. (a) Major meteor showers in 2024. (07)

(b) Application of trace elements, rare earth elements in sedimentation process. (07)

Q-2. Describe geochemistry of natural water with mineral stability in Eh-Ph diagrams. (14)

OR

Q-2. (a) Methods of plotting geochemical data. (07)

(b) Principles and uses of flame photometer and UV spectrophotometer. (07)

Q-3. Write explanatory note on Pre-Cambrian shields and platforms of India. (14)

OR

Q-3. (a) Draw a sketch map showing structural framework of Archaean and Dharwar provinces of India. (07)

(b) Sandmata Granulite Complex. (07)

Q-4. Explain Proterozoic mobile belt and provinces of India. (14)

OR

Q-4. (a) Aravalli super group. (07)

(b) Locality and type sections of Cuddapah, Delhi and Vindhyan supergroups. (07)

Q-5. **Attempt any seven questions out of twelve.** (14)

(i) Mention elemental mobility in surface environment.

(ii) Give two examples of magmatic crystallization process from India.

(iii) Mention two locality of fossil meteorite.

(iv) Name five types of metamorphism proposed by Eskola.

(v) What is diffusional metamorphism? Give example.

(vi) Mention two environments of chemical and geochemical sediments.

(vii) Give mineral constituents of TTG gneiss with locality.

(viii) Mention age, locality and composition of Acasta gneiss.

(ix) What you know about Sargur Schist Complex?

(x) Give the composition and locality of Pandyan mobile belt.

(xi) Give the composition of Komatites.

(xii) Give Precambrian geochronological framework of Aravalli supergroup.