

CSM—36/24

PART—II/PAPER—VI

GEOLOGY

PAPER—I

Time : 3 Hours

Full Marks : 250

The question paper contains 18 (Eighteen) questions in GROUP—A, (12) and GROUP—B, (06) together.

GROUP—A

Candidates to attempt 10 (ten) questions within word limit of 250.

Each question carries 15 marks.

1. With neat diagrams, give a detailed note on the Classification and mechanism of folds and faults.
2. Give a detailed account on island arcs and the evolution of primary active arcs.
3. What is an unconformity? Explain the different types of unconformities with neat diagrams. Add a note on the method of recognizing unconformities in the field.
4. Give an account on weathering and the different types of weathering and mass wasting.
5. Discuss in detail the applications of geomorphology in mineral prospecting, civil engineering and environmental studies.
6. Write an essay on the plate tectonism and seafloor spreading.

7. Explain in detail the morphometric analysis of drainage basins and its significance.
8. What is volcanism? Describe the causes and mitigative measures of volcanism with a note on the volcanic products.
9. Explain the causes and effects of earthquakes. Differentiate between seismograms and seismographs.
10. What are deep-sea trenches? Discuss how mid-oceanic ridges are formed.
11. Write an essay on the Geographic Information System and its applications.
12. What are shear joints and tension joints? Describe and differentiate them with a note on the foliation and orientation of foliation within the strain ellipsoid.

GROUP—B

Candidates to attempt 05 (five) questions within word limit of 300.

Each question carries 20 marks.

13. What are the geological investigations to be taken for the design and construction of tunnels and bridges? Discuss in detail.
14. Describe the stratigraphic significance and the evolution of trilobites.
15. Give a detailed account on the geology and mineral richness of Odisha State.
16. Explain the engineering properties of rocks. Describe the various types of landslides, their causes and mitigative measures.

17. Give an account on the Cuddapah and Vindhyan supergroup of rocks and their mineral wealth.
18. Write an essay on the quality of groundwater with a note on the saltwater intrusion.

Candidate
must not
write on
this margin