

CSM—36/24

PART—II/PAPER—VI

GEOLOGY

PAPER—I

**Candidate
must not
write on
this margin.**

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.

**Candidate
must not
write on
this margin.**

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.**



SPACE FOR ROUGH WORK

**Candidate
must not
write on
this margin.**

