

CSM—37/24
PART—II/PAPER—VII
GEOLOGY
PAPER—II

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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. Explain why ultramafic rocks generally do not have volcanic counterparts.
2. Discuss the types of peridotites and pyroxenites.
3. Explain why olivine and quartz are not considered an equilibrium mineral assemblage.
4. Describe progressive metamorphism of calcareous rocks.
5. Discuss various textures associated with igneous rocks, their types, formations and significance.
6. Discuss the process of normal zoning in plagioclase.
7. Discuss the relationship between ionic radius ratio and coordination number.

8. Briefly discuss the structure, classification and occurrence of olivine.
9. Give the classification of volcanic rocks based on mineralogy and texture.
10. Explain Goldschmidt's mineralogical phase rule.
11. Explain Bravais lattice and its significance.
12. Briefly explain the textural classification of non-clastic rocks.

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GROUP—B

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

*Each question carries **20** marks.*

13. Explain the characteristic features of cavity filling with suitable examples.
14. Define coal. Briefly describe the mode of occurrence and distribution of Gondwana coals in India.
15. Describe the process of calculating mineable reserve of an ore body.
16. Briefly describe the process of formation of Gossan. Mention its importance.
17. Describe the elements of petroleum system.
18. Give the classification of gemstones.

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SPACE FOR ROUGH WORK

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