

CSM – 35 / 15

Geology

Paper – II

Time : 3 hours

Full Marks : 300

The figures in the right-hand margin indicate marks.

*Candidates should attempt Q. No. 1 from Section – A and Q. No. 5 from Section – B which are compulsory and **three** of the remaining questions, selecting at least **one** from each Section.*

Section – A

1. Answer any **three** of the following in about **200** words each :
 - (a) Write the chemical and optical properties of Mica group of minerals. 20
 - (b) Discuss the Deccan Volcanism in relation to magma generation, composition and mode of occurrence. 20

- (c) Discuss the various sedimentary structures and their significance. 20
- (d) Write on mineralogical phase diagrams and their use in metamorphic petrogenesis. 20
2. Discuss the concept of metamorphism. Write the conditions and protoliths of granulite metamorphism with Indian examples. 60
3. Write the explanatory notes on the following :
- (a) Ultrabasic rocks 30
- (b) Silicate structures 30
4. Discuss the various sedimentary environments with examples of Indian localities. 60

Section – B

5. Answer any **three** of the following each in about 200 words : $20 \times 3 = 60$
- (a) Controls of ore localization
- (b) Geology of Chromite deposits of Sukinda
- (c) Environmental impacts of open-cast mining
- (d) Gravity method of exploration of metallic deposits

6. Explain the geological setting, occurrence and distribution of Petroleum deposits of India. 60
7. Write notes on the following in brief :
- (a) Explain the process of formation of supergene sulphide enrichment deposits. 30
- (b) Describe the structure and composition of Earth. Add a note on the geochemical classification of elements. 30
8. Answer any two of the following : $30 \times 2 = 60$
- (a) Marine pollution.
- (b) Ore beneficiation of Sulphides.
- (c) National mineral policy of India.

