

GEOLOGY

(Paper II)

Time Allowed : Three Hours

Maximum Marks : 300

QUESTION PAPER SPECIFIC INSTRUCTIONS

(Please read each of the following instructions carefully before attempting questions)

There are EIGHT questions divided in two Sections.

Candidate has to attempt FIVE questions in all.

Question Nos. 1 and 5 are compulsory and out of the remaining, any THREE are to be attempted choosing at least ONE question from each Section.

The number of marks carried by a question/part is indicated against it.

Wherever any assumptions are made for answering a question, they must be clearly indicated.

Word limit in questions, wherever specified, should be adhered to.

SECTION 'A'

1. In about 200 words each, explain any three of the following:

(a) Give an account of twinning in minerals	20
(b) Diopside-anorthite system	20
(c) Facies of regional metamorphism	20
(d) Heavy minerals and their significance	20
2. Give the chemical composition and optical properties of Amphibole group of minerals. Add a note on their classification 60
3. Write explanatory notes on the following:

(a) Give classification and describe petrography and petrogenesis of charnockites	30
(b) ACF and AKF diagrams and their utility	30
4. Give the classification of sandstones. Add a note on their depositional environment. 60

SECTION 'B'

5. In about 200 words each, write notes on any three of the following:

(a) Controls of ore localisation	20
(b) Types of chemical bonds	20
(c) Explain the techniques of sampling	20
(d) Pollution of sea	20
6. Write notes on the following, in brief:

(a) Conservation and utilisation of mineral resources	30
(b) Describe briefly the geology and structure of the Bombay High Petroleum Resources. Comment on their economic importance	30
7. Write notes on the following:

(a) Give an account of the important methods of mining of metallic ores	30
(b) Describe the mineralogy, geology and ore genesis of copper deposits of Khetri Mines	30
8. Write explanatory notes on the following:

(a) Structure and composition of the Earth.	30
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- (b)** Impact of natural hazards on environment. Mitigating measures of any one of these natural hazards.

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