

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.

All questions carry equal marks.

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, write notes on any three of the following:
 - (a) Space lattices
 - (b) Uniaxial and Biaxial Indicatrix
 - (c) Types of magmas and their composition
 - (d) Diagenesis and Lithification
2. Give the chemical composition and optical properties of Felspathoid group of minerals. Name the rocks containing the minerals of this group.
3. Enumerate the generation and evolution of different magmas.
4. Describe the different environments of sediments deposition. Give examples of rocks formed in each of them.

SECTION 'B'

5. In about 200 words each, write notes on any three of the following:
 - (a) ACF diagrams and their utility
 - (b) Skarns and related mineral deposits
 - (c) Conservation of minerals
 - (d) Shrinkage and sublevel stoping
6. Give an account of the petroleum deposits of western India with reference to their geological setting, mode of occurrence, nature of crude oil and their potentiality.
7. What are charnockites and how do they originate? Give salient features of Indian charnockites.
8. Write explanatory notes on the following in brief:
 - (a) Application of aerial photographs in geological studies
 - (b) Exploration techniques applied to mineral deposits
 - (c) Types of aquifers