

GEOLOGY

(Paper I)

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. Answer any three of the following, each within 200 **20×3=60**
- (a) How do structure, climate, topography and vegetation influence rocks in nature?
- (b) Mantle of the earth.
- (c) Significance of Remote Sensing in small mining industry.
- (d) Differentiate between the following pairs: (i) Dome and basin (ii) Horst and graben (iii) Overthrust and underthrust faults (iv) Hanging wall and footwall
2. Discuss the significance and mechanism of sea-floor spreading. **60**
3. Describe the following: **30×2=60**
- (a) Drainage patterns of Indian Sub-continent
- (b) Advantages of photo-geology over conventional geological survey.
4. Define unconformity and describe its various types. How can they be recognized in the field? **60**

SECTION 'B'

5. Answer any three of the following, each within 200 words: **20×3=60**
- (a) Pleistocene glaciation
- (b) Role of geologists in the construction of bridge
- (c) Role of microfossils in correlation of rock formations
- (d) Describe the morphology of Gastropoda shell.
6. Discuss the evolutionary changes in the morphology of Ammonoids. **60**
7. Describe the following: **30×2=60**
- (a) Principles of stratigraphic correlation
- (b) Significance of glossopteris and ptylophyllum in the study of Gondwana System.
8. Discuss the following:

30×2=60

- (a)** Importance of rain water harvesting for living beings
- (b)** Precautions in construction of buildings in earthquake-prone zones.