CSM : 24

GEOLOGY PAPER - I

Time Allowed : 3 hours | Maximum Marks : 100

QUESTION PAPER SPECIFIC INSTRUCTIONS

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

There are eight (8) questions - four (4) questions each in Part A & B. Each question carries 20 marks.

Marks for each question is indicated against it.

Compulsory questions :

(a) Question No. 1 from Part-A and

(b) Question No. 5 from Part-B

[Compulsory questions No. 1 & 5 have 4 (four) Sub-questions carrying 5 marks each.]

Total No. of questions to be attempted :

5 (five) questions.

[A candidate shall attempt 2 (two) compulsory questions from Part A and B. Out of the remaining 6 (six) questions, 3 (three) are to be attempted taking at least 1 (one) but not more than 2 (two) questions from each Part]

Word Limit:

(a) Compulsory questions carrying 5 marks shall have a limit of 150 words.

(b) There shall be no word limit for the remaining questions.

PART - A

1. Answer the following: **(4×5=20)**

(a) Describe the seismic zones of India.

(b) How geological structure and lithology control the morphology of an area?

(c) What are the characteristics of confined and unconfined aquifer?

(d) Write a note on classification of weathering rocks.

2. (a) What are the causes of volcano? Discuss positive and negative relief features produced by volcanoes. **(3+7=10)**

(b) What are the different types of platform used to mount the remote sensor? Discuss in detail its types. **(2+8=10)**

3. Describe the hydrological cycle and its importance in hydrological studies. Write about the vertical distribution of groundwater with a diagrammatic representation of subsurface water. **(10+10=20)**

4. (a) Write a brief note on Engineering classification of Intact rocks. **(10)**

(b) How do column in RC building resist Earthquake? **(10)**

PART - B

5. Answer the following: **(4×5=20)**

(a) Types of faults with suitable examples.

(b) Discuss Gondwana flora and fauna.

(c) Briefly describe the classification of stratigraphic sequences.

(d) Briefly describe the Phanerozoic rocks of India with faunal distribution.

6. Describe the stress and strain ellipsoid and the applications of geological studies. Write about the significance of strain markers in deformed rocks. **(10+10=20)**

7. (a) Explain the evolutionary trends of Equidae with Indian example. **(10)**

(b) Discuss the application of microfossils in petroleum exploration. **(10)**

8. Distribution and classification of Precambrian rocks of India with its economic importance. Briefly discuss the evolution of the Himalayas. **(10+10=20)**

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