1 Fo S 2010

№ 003578

B-JGT-K-HFA

GEOLOGY

Paper I

Time Allowed : Three Hours

Maximum Marks : 200

INSTRUCTIONS

Candidates should attempt questions 1 and 5 which are compulsory, and any THREE of the remaining questions, selecting at least ONE question from each Section.

All questions carry equal marks. Marks allotted to parts of a question are indicated against each.

Answers must be written in ENGLISH only.

Suitable sketches may be drawn, wherever required.

SECTION A

1. Write critical notes, within 150 words each, on the following : *10×4=40*

   (a) The working of Global Positioning System

   (b) Discontinuities in the Earth's interior

   (c) Transcurrent faults

   (d) Gravity faults and their types

2. (a) What is continental drift ? Explain the evidence put forward in favour of the theory. How does the plate tectonic theory support this ? *30*

(b) Discuss the causes of volcanoes. *10*

3. (a) What is mass wasting ? Give an account of the process of weathering and its types. *30*

(b) How does a geologist study the interior of the Earth ? *10*

4. (a) Explain the criteria for the recognition of geological faults in the field. *25*

(b) Discuss the effects of these geological faults. *15*

SECTION B

5. Write critical notes, within 150 words each, on the following : *10×4=40*

   (a) Evolution of suture lines in ammonoids

   (b) Lameta beds

   (c) Principle of lithostratigraphic classification

   (d) Fauna and flora during the Gondwana period

6. (a) Discuss the utility of microfossils in exploration for petroleum. *30*

   (b) Explain how foraminifers are useful in palaeoclimatic studies. *10*

7. (a) Give an account of the Aravalli Bundelkhand Province. *25*

   (b) Explain the evolution of the Himalayas. *15*

8. (a) Write briefly on the economic importance of Precambrian rocks. *10*

   (b) Critically examine the evolution of glabella of Trilobites. *10*

   (c) What are the effects of folds in tunneling ? Explain the problems related to tunnels constructed near steep slopes. *20*