वियोज्य *DETACHABLE*

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I.F.S. EXAM-2015

GEOLOGY

Paper I

Time Allowed : Three Hours | *Maximum Marks : 200*

QUESTION PAPER SPECIFIC INSTRUCTIONS

Please read each of the following instructions carefully before attempting questions.

There are **EIGHT** questions in all, out of which **FIVE** are to be attempted.

Question No. 1 and **5** are compulsory. Out of the remaining **SIX** questions, **THREE** are to be attempted selecting at least **ONE** question from each of the two **Sections A** and **B**.

Attempts of questions shall be counted in sequential order. Unless struck off, attempt of a question shall be counted even if attempted partly. Any page or portion of the page left blank in the Question-cum-Answer Booklet must be clearly struck off.

All questions carry equal marks. The number of marks carried by a question/part is indicated against it.

Answers must be written in **ENGLISH** only.

Neat sketches may be drawn, wherever required.

SECTION 'A'

1. Write critical notes on the following : 8×5=40

1.(a) Causes of earthquakes and Global seismic belts.

1.(b) Global positioning system (GPS).

1.(c) Types of Aerial photographs.

1.(d) Classification of Folds with respect to axial plane orientation.

1.(e) Mid Oceanic Ridges.

2.(a) Describe transform and transcurrent faults, and their differences with diagram. 15

2.(b) Discuss various types of drainage patterns, illustrate your answer with suitable sketches. 15

2.(c) Discuss critically on stress and strain relationships in plastic and elastic rock materials. 10

3.(a) Give an account on classification of faults and critically comment on the mechanism of faulting. 15

3.(b) Describe the different types of key-elements for interpretation of satellite images. 15

3.(c) What are volcanoes ? Discuss critically causes and products of volcanoes. 10

4.(a) Draw the labelled diagrams to explain the mechanism of different plate boundaries. 15

4.(b) What is mass wasting ? Describe the different types of mass wasting. 15

4.(c) Discuss the importance of Stereographic Projections in structural analysis. 10

SECTION 'B'

5. Write critical notes : 8×5=40

5.(a) Morphology of Trilobites.

5.(b) Lithostratigraphy.

5.(c) Permo-Triassic Event.

5.(d) Hydraulic Conductivity.

5.(e) Prevention of Landslides.

6.(a) Discuss the evolutionary trends in Proboscidea, answer with suitable sketches. 15

6.(b) Describe the stratigraphic succession of the rocks of the Siwalik Group. 15

6.(c) Discuss the problems on seawater intrusion as coastal aquifers. 10

7.(a) Describe the challenges and management strategies for effective use of groundwater. 15

7.(b) Discuss the evolutionary trends in Hominoidea. 15

7.(c) Discuss briefly stratigraphy of Dharwar Super Group of rocks. 10

8.(a) Describe the different types of Landslides and the possible rehabilitation measures. 15

8.(b) Discuss the importance of Gondwana flora in palaeoclimatic interpretation. 15

8.(c) Describe the stratigraphic succession of Palaeogene rocks of North Western Himalaya. 10