2015

(1st Semester)

GEOLOGY

FIRST PAPER

(General and Structural Geology)

(PART : A—OBJECTIVE)

(*Marks* : 20)

The figures in the margin indicate full marks for the questions

SECTION—A

(*Marks* : 5)

1. Choose the correct answer and put its number within the brackets provided : 1×5=5

(a) The temperature at the core mantle boundary is roughly

(i) 5600 °C

(ii) 6700 °C

(iii) 7200 °C

(iv) 4800 °C [ ]

(b) The hottest planet in the solar system is

(i) Mercury

(ii) Venus

(iii) Earth

(iv) Mars [ ]

(c) The most destructive wave among the seismic waves is

(i) primary wave

(ii) secondary wave

(iii) Love wave

(iv) Rayleigh wave [ ]

(d) The difference between the highest and the lowest elevation points at a particular area is

(i) contour

(ii) relief

(iii) RF

(iv) topography [ ]

(e) The line of maximum curvature in a fold is called

(i) hinge

(ii) crest

(iii) axis

(iv) trough [ ]

SECTION—B

(*Marks* : 15)

2. Write short notes on the following in not more than *3* or *4* sentences each : 3×5=15

(a) Size of the earth

(b) Biology's big bang

(c) Abrasion and deflation

(d) Importance of dip and strike

(e) Recumbent fold

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GEOLOGY

FIRST PAPER

(General and Structural Geology)

Full Marks : 55

Time : 2½ hours

(PART : B—DESCRIPTIVE)

(*Marks* : 35)

The figures in the margin indicate full marks for the questions

Answer **five** questions, selecting **one** from each Unit

UNIT—I

1. Write notes on any *two* (enhance your answer with neat sketches) : 3½×2=7

   (a) Planetesimal hypothesis

   (b) Tidal hypothesis

   (c) Nebular hypothesis by Kant

2. Describe the following : 3½+3½=7

   (a) Revolution of the earth

   (b) Magnetic field of the earth

UNIT—II

3. Write short notes on the following : 3½+3½=7

   (a) Origin of hydrosphere

   (b) Composition of the earth's crust

4. Write a descriptive note on different processes involved in mountain formation. 7

UNIT—III

5. Write notes on any *two* of the following : 3½×2=7

   (a) Geological timescale

   (b) Differential expansion and hydration

   (c) World distribution of earthquake

6. What is volcano? Add a note on the types of volcano. 2+5=7

(Continued)

UNIT—IV

7. What is topography? Write the effects of topography on outcrop. 2+5=7

8. Sketch and label Brunton compass. How is dip amount measured using Brunton compass? 2+2+3=7

UNIT—V

9. Describe the geometric classification of faults with suitable examples. 7

10. Write notes on any *two* of the following : 3½×2=7

(a) Plunging fold

(b) Parts of fold

(c) Chevron fold

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