2011

(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

Answer **all** questions

SECTION—A

(*Marks* : 5)

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

(a) The boundary between mantle and core is known as

(i) Mohorovicic discontinuity

(ii) Gutenberg discontinuity

(iii) Lehmann discontinuity

(iv) Asthenosphere [ ]

(b) The age of our Earth is believed to be about

(i) 4·5 billion years old

(ii) 3·5 billion years old

(iii) 2·5 billion years old

(iv) 6·5 billion years old [ ]

(c) Which of the following represents the longest time period?

(i) Precambrian

(ii) Palaeozoic

(iii) Mesozoic

(iv) Cenozoic [ ]

(d) The —— of a rock is the direction which is ninety degree from the dip.

(i) strike

(ii) dip amount

(iii) contour

(iv) None of the above [ ]

(e) An incline fault in which the hanging wall moves downward relatively to the footwall is known as

(i) reverse fault

(ii) strike slip fault

(iii) normal fault

(iv) transverse fault [ ]

SECTION—B

(*Marks* : 15)

2. Answer the following questions in *3* or *4* sentences each : 3×5=15

(a) What is lithosphere?

(b) Name the three most abundant elements of the earth's crust in the order of their abundance.

(c) Define focus and epicentre of an earthquake.

(d) What do you mean by base-map?

(e) Define outlier and inlier.

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FIRST PAPER

(General and Structural Geology)

Full Marks : 55

Time : 3 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 : 7×5=35

UNIT—I

1. Discuss earth's magnetic field and internal heat engine.

2. Describe the internal structure of the earth with a neat sketch.

UNIT—II

3. Describe, in brief, the composition of the earth's crust and mantle.

4. Enumerate the application of radioisotopes in determining the age of the earth.

UNIT—III

5. Describe the causes and effects of earthquake in brief.

6. Describe, in brief, the different types of weathering in a rock.

UNIT—IV

7. Explain the basic principles of Brunton compass and clinometer.

8. Describe the effects of topography on outcrop.

UNIT—V

9. Describe the geometric classification of folds with neat sketch.

10. What is unconformity? Describe the different types of unconformity in brief.

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