2 0 1 7

(1st Semester)

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 the following :　　　3½×2=7

   (a) Relationship between Geology and Civil Engineering

   (b) Shape of the earth

2. Write descriptive notes on the following :　3½×2=7

   (a) Mantle

   (b) Origin of the earth : nebular hypothesis

UNIT—II

3. What is the age of the earth? Discuss the application of radioactivity in determining the age of the earth.　　　2+5=7

4. Write brief notes on the following :　　3½×2=7

   (a) Origin of atmosphere

   (b) Origin of mountains

UNIT—III

5. What is volcano? Write different types of volcanoes with diagrams.　　　1+6=7

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

   (a) Distribution of earthquake belts

   (b) Geological timescale

   (c) Erosion

(3)

UNIT—IV

7. *(a)* Elaborate the importance of dip in Civil Engineering projects.   3

   (b) Write the parts and uses of clinometer compass.   2+2=4

8. Write notes on any *two* of the following :

                                                                                                                    3½×2=7

   (a) Outcrop

   (b) Toposheet

   (c) Uses of Brunton compass

UNIT—V

9. Describe the geometric classification of joints with neat sketches.   7

10. Write notes on any *two* of the following :

                                                                                                                    3½×2=7

   (a) Parts of fault

   (b) Anticline and syncline

   (c) Angular unconformity

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Subject Code : GEOL/I/01

Booklet No. A

Date Stamp ....

....

INSTRUCTIONS TO CANDIDATES

1. **The Booklet No. of this script should be quoted in the answer script meant for descriptive type questions and vice versa.**

2. **This paper should be ANSWERED FIRST and submitted within** *45 minutes* **of the commencement of the Examination.**

3. **While answering the questions of this booklet, any cutting, erasing, over-writing or furnishing more than one answer is prohibited. Any rough work, if required, should be done only on the main Answer Book. Instructions given in each question should be followed for answering that question only.**

*Signature of
Scrutiniser(s)*

*Signature of
Examiner(s)*

*Signature of
Invigilator(s)*

/90

2 0 1 7

(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 discontinuity found between crust and mantle is

   (i) Conrad discontinuity

   (ii) Mohorovicic discontinuity

   (iii) Lehmann discontinuity

   (iv) Gutenberg discontinuity   [   ]

/90

(b) Terrestrial planets are

(i)   Earth, Venus, Mars and Mercury

(ii) Earth, Venus, Mars and Saturn

(iii) Earth, Venus, Jupiter and Mercury

(iv) Earth, Venus, Mars and Neptune

[   ]

(c) Intensity of an earthquake is based on

(i)   amplitudes

(ii) energy released

(iii) destruction on the earth's surface

(iv) distance between epicentre and focus

[   ]

(3)

(d) The apparent dip of any bed towards any direction

   (i) is greater than true dip

  (ii) is equal to true dip

 (iii) is less than true dip

 (iv) depends on dip amount   [   ]

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

   (i) axial plane

  (ii) crest

 (iii) fold axis

 (iv) hinge line   [   ]

SECTION—B

(*Marks* : 15)

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

(a) Scope of Geology

(b) Composition of Earth in comparison to Venus

(c) Epicentre

(d) Relief

(e) Outlier

★★★

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