

**B.Sc. Part—III (Semester—V) Examination**

**GEOLOGY**

Time : Three Hours]

[Maximum Marks : 80

**Note :—**(1) All questions are compulsory.

(2) Draw neat sketches wherever necessary.

1. (A) Fill in the blanks :

- (i) Dip of the bed other than true dip is called \_\_\_\_\_.
- (ii) An exposed rock body on the surface is called \_\_\_\_\_.
- (iii) The crust and mantle are separated by a discontinuity known as \_\_\_\_\_.
- (iv) The waves generated due to earthquake are known as \_\_\_\_\_.

2

(B) Choose the correct alternatives :

- (i) Dip of the bed is a vector quantity because it has got :
  - (a) Direction
  - (b) Magnitude
  - (c) Direction and Magnitude
  - (d) None of the above
- (ii) Drag fold :
  - (a) Occurs within competent bed
  - (b) Within incompetent bed
  - (c) When vertical stresses act on horizontal beds
  - (d) None of the above
- (iii) Porosity is :
  - (a) Equal to specific retention
  - (b) Equal to specific yield
  - (c) Equal to sum of specific retention and yield
  - (d) Less than specific yield

- (iv) A large crescent geologically active basin is known as :
- |            |                      |   |
|------------|----------------------|---|
| (a) Dome   | (b) Geosyncline      |   |
| (c) Valley | (d) All of the above | 2 |

(C) Answer in **one** sentence :

- |                                   |   |
|-----------------------------------|---|
| (i) Define Joints.                |   |
| (ii) What are Geosyncline ?       |   |
| (iii) Define Folds.               |   |
| (iv) What are Confined Aquifers ? | 4 |

2. Explain the following :

- |                           |   |
|---------------------------|---|
| (a) Dip and its types.    | 4 |
| (b) Angular unconformity. | 4 |
| (c) Outlier-Inlier.       | 4 |

**OR**

- |                                 |   |
|---------------------------------|---|
| (p) Brunton compass.            | 4 |
| (q) Offlap-Onlap.               | 4 |
| (r) Outcrops and its dimension. | 4 |

3. Write in brief on the following :

- |   |   |
|---|---|
| (a) Significance of joints.               | 4 |
| (b) Geometrical classification of joints. | 4 |
| (c) Recumbent fold.                       | 4 |

**OR**

- |  |   |
|--|---|
| (p) Symmetrical folds.                     | 4 |
| (q) Recognition of the folds in the field. | 4 |
| (r) Causes of folding.                     | 4 |

4. Give an account of the Interior of the Earth with reference to Seismic Waves. 12

**OR**

What is an Isostasy ? Discuss any two hypothesis which explain the Isostasy. 12

5. Discuss the following :

(a) Types of plate margins. 4

(b) Paleomagnetism. 4

(c) Evidences of continental drift. 4

**OR**

(p) Causes of plate tectonics. 4

(q) Seafloor spreading. 4

(r) Continent-continent Collision. 4

6. Explain the following :

(a) Vertical distribution of ground water. 4

(b) Permeability. 4

(c) Confined aquifer. 4

**OR**

(p) Hydrologic cycle. 4

(q) Water table. 4

(r) Unconfined aquifer. 4

7. Discuss the Darcy's Law with its utility. 12

**OR**

Give an account of groundwater provinces of India. 12

