

**B.Sc. (Part—III) Semester—V Examination**  
**GEOLOGY**  
**(Structural Geology, Plate Tectonics and Hydrology)**

Time : Three Hours]

[Maximum Marks : 80

- Note** :— (1) All questions are compulsory.  
(2) Draw neat labeled diagrams wherever necessary.

1. (A) Fill in the blanks :— 2
- (i) The wave passing through solid, liquid and gases is \_\_\_\_\_ .
  - (ii) Fractures along which no significant displacement takes place is known as \_\_\_\_\_ .
  - (iii) The phenomenon in which two oceanic crusts converge and one plate bends downward beneath the other is known as \_\_\_\_\_ .
  - (iv) The difference in hydraulic head at two Points is known as \_\_\_\_\_ .
- (B) Choose the correct alternatives :— 2
- (i) In Fold, limbs are dipping towards axis known as :
    - (a) Anticline (b) Syncline
    - (c) Hinge (d) None of the above
  - (ii) Distance between two successive crest and trough is :
    - (a) Amplitude (b) Wave length
    - (c) Anticline (d) Syncline
  - (iii) Core and mantle are separated by :
    - (a) Mohorovicic discontinuity (b) Conrad discontinuity
    - (c) Guttenberg discontinuity (d) Lehman's discontinuity
  - (iv) The least porous and permeable rocks are :
    - (a) Clay (b) Sandstone
    - (c) Granite (d) Limestone
- (C) Answer in **ONE** sentence :—
- (1) Apparent Dip (2) Isostacy
  - (3) Continental drift (4) Conductivity.
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2. Explain the following :—
- (a) Outlier and Inlier
  - (b) Outcrop and its thickness
  - (c) Dip strike of Bed

**OR**

- (p) Outcrop in relation with topography.
  - (q) Recognition of unconformity in field
  - (r) Brunton compass. 12
3. Explain the following :—
- (a) Isoclinal fold.
  - (b) Significance of joints.
  - (c) Parts of Fold.

**OR**

- (p) Classification of joints.
  - (q) Causes of folding.
  - (r) Recognition of fold in field. 12
4. Describe interior of earth as revealed by seismic wave.

**OR**

- What is Isostasy and describe in detail various hypotheses. 12
5. What is plate tectonics ? Describe various types of plate margins.

**OR**

- What is continental drift ? Describe concept of continental drift. 12
6. Explain the following :—
- (a) Water cycle
  - (b) Semi-confined aquifer
  - (c) Porosity.

**OR**

- (p) Water table
  - (q) Confined aquifer
  - (r) Permeability. 12
7. Explain the following :—
- (a) Darcy's Law.
  - (b) Cone of Depression.
  - (c) Deccan trap province.

**OR**

- (p) Influent and Affluent seepage
- (q) Recharge and discharge
- (r) Archean Province. 12