

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

**5S : 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) The unconformity in which, the beds on either side of unconformity are not parallel is called \_\_\_\_\_.
- (ii) Crust and mantle boundary occurs at the depth \_\_\_\_\_.
- (iii) The type of fold in which axis is almost inclined is called \_\_\_\_\_.
- (iv) The concept of continental drift was proposed for the first time \_\_\_\_\_.

(B) Choose correct alternatives :

- (i) The fold in which, limbs are essentially dipping in the same direction with same angle of dip are
  - (a) Recumbent Fold
  - (b) Drag Fold
  - (c) Overturned Fold
  - (d) Isoclinal Fold.
- (ii) Airy's model of compensation is based on :
  - (a) Different density with different height
  - (b) Same density with different height
  - (c) Density increases with the depth
  - (d) All of above.
- (iii) The cyclic movement of water in atmosphere and Earth is called :
  - (a) Rock cycle
  - (b) Hydrologic cycle
  - (c) Ground water movement
  - (d) All of the above.

(iv) Shear joints are formed by :

- (a) Tensional stresses
- (b) Shearing stresses
- (c) Cooling of magma
- (d) None of above.

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(C) Answer in one sentence :

- (a) What is unconformity ?
- (b) Define Porosity.
- (c) What is isostatic equilibrium ?
- (d) What is continental drifting ?

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2. Explain the following :

- (a) Clinometer compass
- (b) Outlier-Inlier
- (c) Angular unconformity

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**OR**

- (d) Outcrop and width of outcrop.
- (e) Windows and Klippe
- (f) Dip and its type.

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3. What are Folds ? Describe the classification of fold.

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**OR**

Define Joint. Describe the classification of Joints.

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4. What are seismic waves ? Describe the Interior of Earth on the basis of seismological evidences.

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**OR**

Define Isostasy. Explain the Pratt's and Airy's hypothesis, add a note on their misunderstanding about isostasy.

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5. Explain the following :

- (a) Divergent plate boundary.
- (b) Sea-floor spreading
- (c) Geometric fitting of the continents together.

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**OR**

- (d) Convergent plate boundary 4
  - (e) Mid-oceanic ridges 4
  - (f) Paleomagnetism. 4
6. Explain the following :
- (a) Hydrological cycle 4
  - (b) Water-table 4
  - (c) Porosity and permeability. 4

**OR**

- (d) Confined and unconfined aquifer 4
  - (e) Storage coefficient and conductivity 4
  - (f) Vertical distribution of ground-water. 4
7. Describe the following :
- (a) Recharge and discharge 4
  - (b) Cone of depression 4
  - (c) Gondwana ground water province. 4

**OR**

- (d) Darcy's law 4
- (e) Himalayan high land province 4
- (f) Types of seepages. 4

