

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 upper surface of the saturation zone is _____.
- (ii) The line of maximum curvature in a Fold is known as _____.
- (iii) Lower continental crust is known as _____.
- (iv) According to Wegener, the vast master continent was named _____.

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(B) Choose the correct alternatives :

- (i) Which Fold has got angular crest ?
 - (a) Chevron Fold
 - (b) Open Fold
 - (c) Box Fold
 - (d) Cylindrical Fold
- (ii) The true dip of a bed is considered to be a :
 - (a) Vector Quantity
 - (b) Scalar Quantity
 - (c) Both (a) and (b)
 - (d) None of these
- (iii) Clay is an example of :
 - (a) Aquifer
 - (b) Aquiclude
 - (c) Aquitard
 - (d) Aquifuge
- (iv) An unconformity shows :
 - (a) Difference in Composition
 - (b) Difference in Ages
 - (c) Difference in Location
 - (d) Difference in Structure

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

- (i) Define strike.
- (ii) Storage coefficient.
- (iii) Define porosity.
- (iv) What are unconfined Aquifers ?

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2. Explain the following :

- (a) Brunton compass
- (b) Disconformity
- (c) Windows – Klippe.

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OR

- (p) Angular Unconformity
- (q) Offlap – On lap
- (r) Dip and its types.

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3. Write in brief on the following :

- (a) Recognition of Fold 4
- (b) Geometrical classification of Joints 4
- (c) Chevron Fold 4

OR

- (p) Joints and its types 4
- (q) Fold and its parts 4
- (r) Causes of Folding. 4

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

OR

Explain in brief the Wegener's theory of continental drift and give evidences that support this theory. 12

5. Discuss the following :

- (a) Paleomagnetism 4
- (b) Seafloor spreading 4
- (c) Convergent Plate Boundary. 4

OR

- (p) Causes of Plate-Tectonics 4
- (q) Mid-Oceanic ridges 4
- (r) Divergent Plate Boundary. 4

6. Explain the following :

- (a) Type of Aquifer 4
- (b) Water-Table 4
- (c) Porosity-Permeability. 4

OR

- (p) Hydrological cycle 4
- (q) Recharge of Ground water 4
- (r) Vertical distribution of Ground water. 4

7. Describe in detail the Darcy's Law for movement of ground water along with its validity. 12

OR

Give an account of ground water provinces of India. 12