

B.Sc. (Part-III) Semester-VI Examination
6S : GEOLOGY

Time : Three Hours]

[Maximum Marks : 80

Note :— (i) All questions are compulsory.

(ii) Draw neat and well labelled diagrams wherever necessary.

1. (A) Fill in the blanks :

- (i) If the amount of strain in all parts of a body is unequal, the strain is said to be _____ strain.
- (ii) The angle between the inclined fault plane and a vertical plane is called as _____.
- (iii) The vertical aerial photographs are taken with axis of camera in _____ position.
- (iv) Large amount of samples are reduced to obtain laboratory sample by _____ and _____ method. 2

(B) Choose correct alternatives :

- (i) Stress can be expressed as :
 - (a) force/Area (b) force×Area (c) force+Area
- (ii) In two consecutive aerial photography the overlap should be :
 - (a) 30% (b) 60% (c) 90%
- (iii) The vertical displacement in a fault is known as :
 - (a) Throw (b) Heave (c) Hade
- (iv) The instrument used in Gravity method :
 - (a) Resistivity meter
 - (b) Magnetometer
 - (c) Gravimeter 2

(C) Answer in **one or two** sentences each :

- (i) What is satellite imagery ?
- (ii) Define scale of photograph.
- (iii) Write down the principle of Magnetic Method.
- (iv) What is step faulting ?

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2. Explain the following :

- (a) Concept of stress and strain.
- (b) Behaviour of rock with depth.
- (c) Deformation and its types.

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OR

- (p) Mohr's circle.
- (q) Strain and its types.
- (r) Interrelationship of stress-strain and time.

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3. What is fault ? Describe the genetic and geometric classification of faults.

12

OR

Describe in detail the origin and kinds of Lineation.

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4. Describe the following :

- (a) Stereopair and photomosaic.
- (b) Overlap and sidelap.
- (c) Photogeology and Remote sensing.

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OR

- (p) Types of Aerial photographs.
- (q) Drift and crab.
- (r) Pocket and mirror stereoscope.

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5. Explain the following :
- (a) Shape, size and pattern. 4
 - (b) Guidelines for structural interpretation. 4
 - (c) Applications of photogeology. 4

OR

- (p) Tone and Texture. 4
 - (q) Scale of Aerial photograph. 4
 - (r) Guidelines for Lithological interpretation. 4
6. Explain in detail the criteria and guides to ore search. 12

OR

Define sampling. Describe in detail the various types of sampling. 12

7. Give an account of the following :
- (a) Gravity Method. 4
 - (b) Seismic Method. 4
 - (c) Geochemical Method. 4

OR

- (p) Resistivity Method. 4
- (q) Magnetic Method. 4
- (r) Equipotential Method. 4

