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

Time : Three Hours] [Maximum Marks : 80

Note :—(1) All questions are compulsory.
(2) Draw neat and well labelled diagrams wherever necessary.

1. (A) Fill in the blanks :— 2

(i) A fault in which hanging wall has moved upward relative to footwall is called as _____.

(ii) _____ method is based on measurement of gravity differences.

(iii) A photograph taken with optical axis of camera tilted is called _____ photo.

(iv) Water appears _____ on satellite imagery.

(B) Choose the correct alternatives :— 2

(i) Instrument used to view aerial photographs in 3-dimension :

(a) Theodolite (b) Stereograph
(c) Stereoscope (d) Stereogram

(ii) The principal behind gravity method is :

(a) Gravitational pull (b) Magnetic susceptibility
(c) Conductivity (d) None of the above

(iii) When stress on all the parts of body is equal then it is termed as _____.

(a) Homogeneous (b) Inhomogeneous
(c) Strain (d) Rupture

(iv) The vertical displacement in fault is known as :

(a) Throw (b) Heave
(c) Slip (d) Hade

(C) Answer in **ONE** or **TWO** sentences :— 4

(i) What is Normal fault ?

(ii) What is Photogeology ?

(iii) Define Strain.

(iv) What is Lineation ?

2. Explain the following :—
   (a) Deformation 4
   (b) Stress and strain 4
   (c) Pore fluid pressure 4

OR

   (p) Effect of temperature 4
   (q) Mohr's circle. 4
   (r) Interrelationship between stress-strain and time. 4

3. What are faults ? Describe the classification of faults in detail. 12

OR

   What is Lineation ? Describe the various types of lineation. 12

4. Explain the following :
   (a) Importance and uses of Photogeology and Remote sensing. 4
   (b) Lens stereoscope. 4
   (c) Aerial photographs. 4

OR

   (p) Photo Mossaics. 4
   (q) Overlap and Sidelap. 4
   (r) Pocket stereoscope. 4

5. Describe the guidelines for structural interpretation in detail. 12

OR

   Describe the various elements of photorecognition. 12

6. Describe the following :—
   (a) Lithological controls of ore localization. 4
   (b) Channel sampling. 4
   (c) Bore hole sampling. 4

OR

   (p) Chip sampling. 4
   (q) Coning and quartering method. 4
   (r) Calculation of ore reserve. 4

7. Explain the following :—
   (a) Resistivity method 4
   (b) Geobotanical method of exploration. 4
   (c) Geochemical cycle. 4

OR

   (p) Magnetic method. 4
   (q) Gravity method. 4
   (r) Geochemical method. 4