B.Sc. (Part–III) Semester–VI Examination

6S : GEOLOGY

Time : Three Hours] [Maximum Marks : 80

Note :— (1) All questions are compulsory.

(2) Draw a neat diagram wherever necessary.

1. (A) Fill in the blanks :

(i) Sample collected along the line of suitable interval is called _____.

(ii) The _____ of a fault is the angle of inclination of fault plane measured from the vertical.

(iii) A fault which runs parallel to the strike of strata is called _____ fault.

(iv) Mineral exploration is the process of finding _____ to mine. 2

(B) Choose the correct alternatives :

(i) The total displacement measured along the fault plane is known as :

(a) Throw (b) Strike

(c) Net-slip (d) All of the above

(ii) The instrument used to view the aerial photograph in 3D :

(a) Pocket or mirror stereoscope (b) Goniometer

(c) Rotimeter (d) All of the above

(iii) When platy of flaky mineral orient themselves parallel to one another, then the texture is called as :

(a) Foliation (b) Liniation

(c) Lithification (d) All of the above

(iv) The low angle faults are those which have dip :

(a) less than 45° (b) less than 10°

(c) more than 45° (d) less than 100° 2

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

(i) What is stress ?

(ii) What is reverse fault ?

(iii) What is exploration ?

(iv) What is aerial photo ? 4

2. What is stress and strain ? Describe in detail behavior of rock with depth. 12

OR

Describe the method of determining strain by using bilateral symmetrical fossils. 12

3. Explain the following :

(a) Normal fault. 4

(b) Lineation. 4

(c) Causes of faulting. 4

OR

(p) Recognition of fault in field. 4

(q) Part of fault. 4

(r) Horst and graben. 4

4. Explain the following :

(a) Drift and crab. 4

(b) Mirror stereoscope. 4

(c) Overlap and sidelap. 4

OR

(p) Stereo-pairs. 4

(q) Pocket stereoscope. 4

(r) Lithological interpretation of aerial photos. 4

5. Explain the following :

(a) Application of remote sensing. 4

(b) Shape and size of aerial photo. 4

(c) Tone and texture of aerial photo. 4

OR

(p) Scale of photograph. 4

(q) Vertical exaggeration. 4

(r) Application of photogeology 4

6. Explain the following :

(a) Channel sampling. 4

(b) Criteria and guides to ore search. 4

(c) Coning and quartering. 4

OR

(p) Car sampling. 4

(q) Chip sampling. 4

(r) Calculation of grade and ore reserves. 4

7. Describe in detail geophysical magnetic method. 12

OR

Describe in detail geophysical electrical method. 12