B.Sc. Part–I Semester–I Examination

GEOLOGY (NEW)

General Geology, Physical Geology, Mineralogy, Crystallography & Field

Time : Three Hours] [Maximum Marks : 80

N.B. :— (1) All the questions are compulsory.

(2) Draw neat and well labelled diagram wherever necessary.

1. (A) Fill in the blanks :

(i) During the crystallization the foreign particles caught up within the clear crystal are called _____.

(ii) The Mineral Muscovite shows _____ type of form.

(iii) Solid product of Volcanoes are known as _____.

(iv) The angle at which the total internal reflection takes place are called as _____. 2

(B) Choose the correct alternatives :

(i) Multiple twinning is a characteristic of :

(a) Mica Family (b) Feldspar Family

(c) Pyroxene Family (d) Amphibole Family

(ii) The Mineral that shows darkness through out the rotation of stage under-cross-nicol are called as :

(a) Isotropic (b) Anisotropic

(c) Pleochroic (d) None of above

(iii) The deposits formed by the River are called as :

(a) Fluvial (b) Lacusterine

(c) Aeoline (d) Glacial

(iv) The normal class of cubic system had :

(a) 9 plane 13 Axes, centre of Symmetry Present

(b) 7 plane 7 Axes, centre of Symmetry Present

(c) 5 plane 5 Axes, centre of Symmetry Present

(d) 3 plane 3 Axes, centre of Symmetry Present 2

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

(i) What are Polaroids ?

(ii) What is Seismograph ?

(iii) What is Goniometer ?

(iv) Define Hardness. 4

2. Explain the following :

(a) C^{14} method 4

(b) Tidal Hypothesis 4

(c) Lithosphere and Hydrosphere 4

OR

(d) Fundamental branches of Geology 4

(e) Planetesimal Hypothesis 4

(f) Potassium-Argon method. 4

3. Explain the following :

(a) Sand-dunes and its type 4

(b) Pedestal-rock 4

(c) Meandering and ox-bow lake 4

OR

(d) Delta-deposits 4

(e) Chemical weathering of rock 4

(f) Loess-deposit 4

4. What are Volcanoes ? Describe the various products of volcanoes. 12

OR

What are Earthquakes ? Describe the construction and working of Seismogram and Seismograph. 12

5. What is Mineral ? Describe in detail the various physical properties of mineral with suitable examples. 12

OR

What is Nicol Prism ? Describe in detail the construction and working of Nicol Prism. 12

6. Explain the following

(a) Symmetry of cube 4

(b) Goniometer 4

(c) Axis of Symmetry 4

OR

(d) Law of constancy of interfacial angle 4

(e) Symmetry characters of Tetragonal System 4

(f) Crystallographic Axes. 4

7. Explain the following :

(a) Significance of geological field work 4

(b) Scale of Toposheet 4

(c) Uses and aim of Surveying 4

OR

(d) Chain Survey 4

(e) Lattitude and longitude 4

(f) Numbering of Toposheet. 4