

**B.Sc. (Part-I) Semester-II Examination
GEOLOGY (OLD) (UPTO SUMMER-2019)**

Time : Three Hours]

[Maximum Marks : 80

Note :— (1) Question No. 1 is compulsory.

(2) Solve total **seven** questions.

(3) Draw well labelled diagrams wherever necessary.

1. (A) Fill in the blanks :

(i) Nicol prism made up of pure variety of calcite are known as _____.

(ii) Garnet is _____ between cross-nicol.

(iii) Mechanically formed sedimentary rocks are known as _____.

(iv) The acid igneous rock consists of _____ % of Silica. 2

(B) Choose the correct alternatives :

(i) Mineral which shows cross-hatch structure under cross-nicol :

(a) Muscovite

(b) Microcline

(c) Calcite

(d) None of above

(ii) The light that vibrates only in one direction is called as :

(a) Plane polarised light

(b) Polarised light

(c) Ordinary light

(d) None of above

(iii) Vindhyan Super Group is economically important for :

(a) Coal deposits

(b) Asbestos

(c) Diamond

(d) None of above

(iv) Multiple twinning is a characteristic of :

(a) Mica Group of Minerals

(b) Feldspar Group of Minerals

(c) Pyroxene Group of Minerals

(d) None of above 2

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

(i) Why Calcite shows Rhombohedral form ?

(ii) What is Isotropism ?

(iii) What are Graded bedding ?

(iv) What is Sinistral coiling ? 4

2. Explain the following :

(a) Reflection and Refraction. 4

(b) Extinction. 4

(c) Isotropic and Anisotropic Minerals 4

OR

(p) Cleavage. 4

(q) Becke-line-effect. 4

(r) Polarisation colour. 4

3. Describe in detail the mineralogy, physical properties, optical properties and structure of Olivine Group of Minerals. 12

OR

Describe in detail the mineralogy, physical properties, optical properties and structure of Pyroxene Group of Minerals. 12

4. Describe the following :
- (a) Mineralogical classification of igneous rocks. 4
 - (b) Ultrabasic igneous rock. 4
 - (c) Granite. 4

OR

- (p) Classification of igneous rocks on the basis of Silica saturation. 4
- (q) Bowen's reaction series. 4
- (r) Basalt. 4

5. What are Metamorphic rocks ? Describe the texture and structure of metamorphic rocks. 12

OR

What are Sedimentary rocks ? Describe the classification of sedimentary rocks. 12

6. Explain the following :
- (a) Geological history of Gastropoda. 4
 - (b) Classification of Brachiopoda. 4
 - (c) Morphology of Lamellibranchia. 4

OR

- (p) Morphology of Brachiopoda. 4
- (q) Geological history of Lamellibranchia. 4
- (r) Difference between Lamellibranchia and Brachiopoda. 4

7. Describe the following :
- (a) Economic importance of Archean Super Group. 4
 - (b) Classification of Cuddapah Super Group. 4
 - (c) Lithology of Kurnool system. 4

OR

- (p) Sausar and Sakoli series. 4
- (q) Classification of Vindhyan Super Group. 4
- (r) Stratigraphy of Vidharba region. 4