

**Geo-02 - Geology Paper-II (Mineralogy And Elementary Mineral Optics)**

P. Pages : 2

Time : Three Hours



**GUG/S/19/1211**

Max. Marks : 50

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- Notes : 1. All questions are compulsory and carry equal marks.  
2. Draw neat sketches wherever necessary.

1. Give brief account of the following:-

- i) Hardness in minerals
- ii) Forms of minerals

**OR**

Give a brief account of pyroxene group with reference to chemical, physical properties and geological occurrence.

2. Give a brief account of Mica group with reference to chemical, physical properties and geological occurrence.

**OR**

Draw a well labelled diagram of petrological microscope and describe functions of various parts.

3. Give brief account of the following:-

- a) Polymorphism
- b) Physical properties of microcline
- c) Physical properties of hornblende
- d) Nicol prism

**OR**

Describe the following:-

- e) Cleavage
- f) Radioactivity
- g) Physical properties of pyrope
- h) Abbe Refractometer

4. Write brief notes on the following:-

- a) Isomorphism
- b) Physical properties of Orthoclase
- c) Physical properties of Kyanite
- d) Becke line method

**OR**

Write brief notes on the following:-

- e) Pseudomorphism
- f) Physical properties of Natrolite
- g) Physical properties of sillimanite
- h) Refraction

5. Write on the following in not more than two sentences **any ten**.

- a) Definition of Minerals
- b) Definition of ore
- c) Specific gravity
- d) Piezoelectricity
- e) Pyroelectricity
- f) Name any two strongly magnetic minerals
- g) Name any two monoclinic amphiboles
- h) Name any two varieties of garnet.
- i) Give any two diagnostic properties of olivine.
- j) Total reflection
- k) Dispersion
- l) Polarised light

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