

**Geo-02 - Geology : Paper-II (Mineralogy and elementary mineral optics)**

P. Pages : 2

Time : Three Hours



**GUG/W/16/3312**

Max. Marks : 50

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

1. Define specific gravity. Describe its measurement with the help of Walker's steel yard Balance.

**OR**

Give a brief account of Felspar group with reference to chemical composition physical properties of its members and add a note on their geological occurrence.

2. Give a brief account of Aluminous Silicates with reference to chemical composition, physical properties of its members and geological occurrence.

**OR**

Define Refractive Index. Explain, its measurement with the help of Abbe refractometer.

3. Write short notes on the following :-

- a) Hardness.
- b) Properties depending upon electricity.
- c) Physical properties of muscovite.
- d) Nicol prism.

**OR**

Write short notes on the following :-

- e) Mineral composition of Earth's crust.
- f) Physical properties of Flint.
- g) Garnet group.
- h) Critical angle.

4. Describe the following :-

- a) Isomorphism.
- b) Physical properties of Natrolites.

- c) Olivine group.
- d) Becke line method.

**OR**

Describe the following :-

- e) Pseudomorphism.
- f) Nesosilicate.
- g) Physical properties of Tremolite.
- h) Parts of petrological microscope.

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

- a) Polymorphism.
- b) Lustre.
- c) Conchoidal fracture.
- d) Name any two feldspathoids.
- e) Cyclosilicate.
- f) Give chemical composition of stilbite.
- g) Name any two amphiboles.
- h) Name the sodium mica.
- i) Cleavage in Mica.
- j) Plane polarized light.
- k) Reflection.
- l) Refraction.

\*\*\*\*\*