

## UPSC Civil Services Examination

### UPSC Notes [GS-I]

#### Topic: Some major minerals and their characteristics (Geography Notes for UPSC)

##### Minerals

- The earth is composed of various kinds of elements.
- A mineral is a naturally occurring organic and inorganic substance.
- It has an orderly atomic structure and a definite chemical composition as well as physical properties.
- It is composed of two or more elements.
- Minerals like sulphur, copper, silver, gold, graphite, etc. are single element minerals.

##### Feldspar

- Oxygen and Silicon are common elements in all types of feldspar.
- Sodium, potassium, calcium, aluminium, etc. are found in specific feldspar variety.
- It is the single most abundant mineral group on Earth and half of the crust of the earth is composed of feldspar.
- It has light cream to salmon pink colour.
- It is used for making ceramics and glass.

##### Quartz

- It is one of the most important components of granite and sand.
- This hard mineral consists of silica and is virtually insoluble in water.
- It is used in radio and radar.
- This white or colourless mineral is the most important component of granite.

##### Pyroxene

- Pyroxene comprises of aluminium, calcium, iron, magnesium, and silica.
- It forms 10 per cent of the crust of the earth.
- It is usually found in meteorites and occur in green or black colour.

##### Amphibole

- Calcium, iron, aluminium, silica, magnesium are the main elements of amphiboles.
- They form 7 % of the crust of the earth.
- It is found in green or black colour.
- It is mainly used in asbestos industry.
- The other form of amphiboles is Hornblende.

### Mica

- Mica comprises of potassium, aluminium, magnesium, iron, silica, etc.
- It forms 4 % of the crust of the earth. It is generally found in metamorphic and igneous rocks.
- Mica is used in electrical instruments.

### Olivine

- Magnesium, iron and silica are the main elements of olivine.
- It is used in jewellery.
- It usually occurs in a greenish crystal form and is found in basaltic rocks.