

**HIGHER SECONDARY**  
**PRACTICAL STUDY MATERIAL**  
**GEOLOGY**

**PART-III**

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# **MINEROLOGY**

- **ROCK FORMING MINERALS**
- **INDUSTRIAL MINERALS**
- **ORE MINERALS**

The background is a solid orange color with a subtle gradient. It is decorated with faint, semi-transparent silhouettes of various leaves and flowers scattered across the surface, primarily concentrated along the left and right edges.

# ○ ORE MINERALS

SPECIMEN NO:1

# MAGNETITE

## Physical properties

<b>FORM</b>	<b>Massive or octahedral</b>
<b>COLOUR</b>	<b>Iron black</b>
<b>STREAK</b>	<b>black</b>
<b>LUSTER</b>	<b>Metallic</b>
<b>CLEAVAGE</b>	<b>Indistinct</b>
<b>FRACTURE</b>	<b>Conchoidal</b>
<b>HARDNESS</b>	<b>5.5-6.5</b>
<b>SPECIFIC GRAVITY</b>	<b>6.0-6.5</b>



**ORE OF IRON**

# GALENA

## Physical properties

<b>FORM</b>	<b>Cubic ,Massive ,Granular</b>
<b>COLOUR</b>	<b>Lead grey</b>
<b>STREAK</b>	<b>Lead grey</b>
<b>LUSTER</b>	<b>Metallic</b>
<b>CLEAVAGE</b>	<b>Perfect cubic</b>
<b>FRACTURE</b>	<b>Even to sub conchoidal</b>
<b>HARDNESS</b>	<b>2.5</b>
<b>SPECIFIC GRAVITY</b>	<b>7.5</b>



**ORE OF LEAD**

# HEMATITE

## Physical properties

<b>FORM</b>	<b>Tabular, Granula, Compact</b>
<b>COLOUR</b>	<b>Steel grey to brownish red</b>
<b>STREAK</b>	<b>Cherry red</b>
<b>LUSTER</b>	<b>Metallic</b>
<b>CLEAVAGE</b>	<b>Indistinct</b>
<b>FRACTURE</b>	<b>Sub Conchoidal to uneven</b>
<b>HARDNESS</b>	<b>5.5-6.5</b>
<b>SPECIFIC GRAVITY</b>	<b>5.2</b>



**ORE OF IRON**

# BAUXITE

## Physical properties

<b>FORM</b>	<b>Granular ,Earthy</b>
<b>COLOUR</b>	<b>Greyish White , brownish white</b>
<b>STREAK</b>	<b>Greyish White</b>
<b>LUSTER</b>	<b>Dull or Earthy</b>
<b>CLEAVAGE</b>	<b>Absent</b>
<b>FRACTURE</b>	<b>Sub Conchoidal</b>
<b>HARDNESS</b>	<b>1-3</b>
<b>SPECIFIC GRAVITY</b>	<b>2 -2.5</b>



**ORE OF ALLUMINIUM**

# PYROLUSITE

## Physical properties

<b>FORM</b>	<b>Massive , Reniform or Granular</b>
<b>COLOUR</b>	<b>Iron black</b>
<b>STREAK</b>	<b>Black</b>
<b>LUSTER</b>	<b>Metallic</b>
<b>CLEAVAGE</b>	<b>Absent</b>
<b>FRACTURE</b>	<b>Uneven</b>
<b>HARDNESS</b>	<b>2-2.5</b>
<b>SPECIFIC GRAVITY</b>	<b>4.8</b>



**ORE OF MANGANESE**



SPECIMEN NO:6

# CHALCOPYRITE

## Physical properties

<b>FORM</b>	<b>Massive or Tabular</b>
<b>COLOUR</b>	<b>Golden yellow</b>
<b>STREAK</b>	<b>Greenish black</b>
<b>LUSTER</b>	<b>Metallic</b>
<b>CLEAVAGE</b>	<b>Indistinct</b>
<b>FRACTURE</b>	<b>Uneven</b>
<b>HARDNESS</b>	<b>3.5-4</b>
<b>SPECIFIC GRAVITY</b>	<b>4.2</b>



**ORE OF COPPER**