

HIGHER SECONDARY
PRACTICAL STUDY MATERIAL
GEOLOGY

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MINEROLOGY

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

● ROCK FORMING MINERALS

QUARTZ

Physical properties

| | |
|-------------------------|--|
| FORM | Hexagonal prism, Massive , Granular |
| COLOUR | Colorless or white |
| STREAK | Colorless |
| LUSTER | Vitreous |
| CLEAVAGE | Absent |
| FRACTURE | Conchoidal |
| HARDNESS | 7 |
| SPECIFIC GRAVITY | 2.62 |



TALC

Physical properties

| | |
|-------------------------|---|
| FORM | Foliated to Fibrous |
| COLOUR | White, silver white apple green, greenish grey, dark green |
| STREAK | White to pearl green |
| LUSTER | Pearly |
| CLEAVAGE | Perfect basal |
| FRACTURE | Uneven |
| HARDNESS | 1 |
| SPECIFIC GRAVITY | 2.58-2.83 |



BIOTITE

Physical properties

| | |
|-------------------------|--|
| FORM | Irregular or fibrous |
| COLOUR | Black, Green to black, Dark brown |
| STREAK | Color less |
| LUSTER | Pearly |
| CLEAVAGE | Perfect basal |
| FRACTURE | Uneven |
| HARDNESS | 2.8-3 |
| SPECIFIC GRAVITY | 2.58-3.2 |



GARNET

Physical properties

| | |
|-------------------------|---|
| FORM | Well formed dodecahedral ,trapezohedral Massive or rounded |
| COLOUR | Red, brown, black,yellow |
| STREAK | colorless |
| LUSTER | vitreous |
| CLEAVAGE | Absent |
| FRACTURE | Conchoidal to uneven |
| HARDNESS | 7.0-7.5 |
| SPECIFIC GRAVITY | 3.5-4.3 |



APATITE

Physical properties

| | |
|-----------------------------|--|
| FORM | Tabular, prismatic, Massive, Granular |
| COLOUR | Pale green, Bluish green, yellowish green |
| STREAK | White |
| LUSTER | Sub resinous to vitreous |
| CLEAVAGE | Indistinct or poor |
| FRACTURE | Conchoidal to uneven |
| HARDNESS | 5.0 |
| SPECIFIC GRAVITY | 2.-3.5 |



FLUORITE

Physical properties

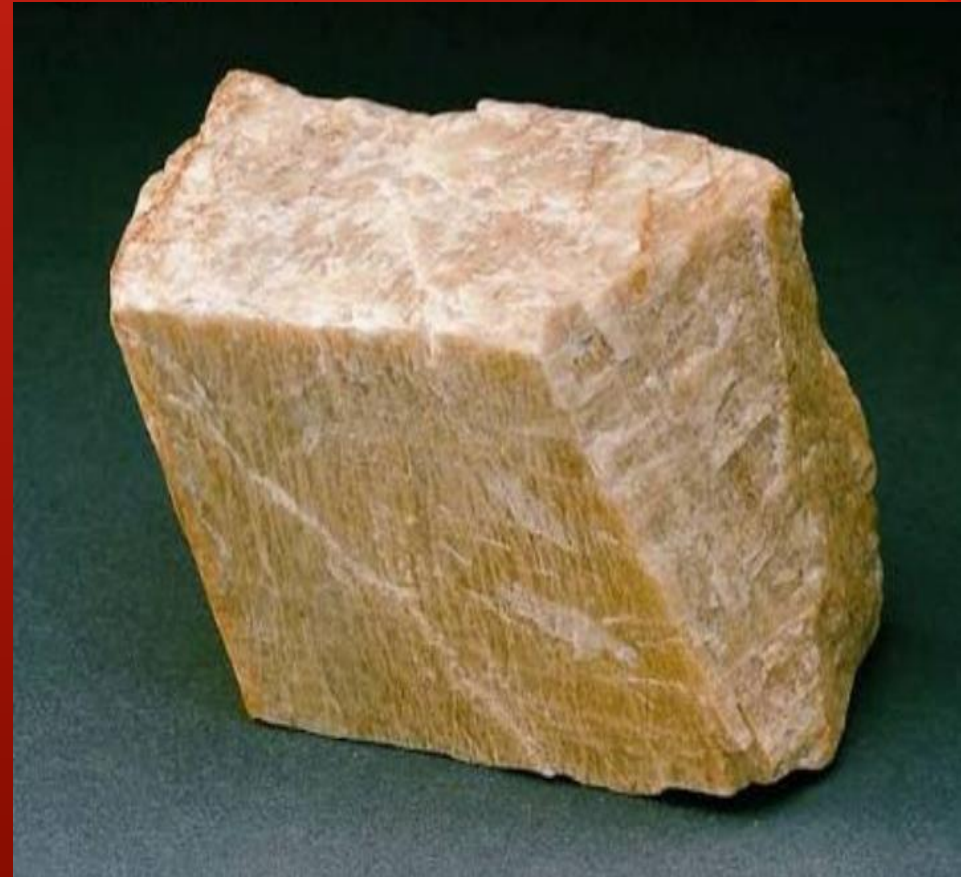
| | |
|-------------------------|-------------------------------------|
| FORM | Cubes very common or Massive |
| COLOUR | Variable or color less |
| STREAK | white |
| LUSTER | Vitreous |
| CLEAVAGE | Perfect |
| FRACTURE | Conchoidal to uneven |
| HARDNESS | 4.0 |
| SPECIFIC GRAVITY | 3.0-3.25 |



PLAGIOCLASE FELDSPAR

Physical properties

| | |
|-------------------------|--|
| FORM | Prismatic ,Tabular |
| COLOUR | White or light coloured |
| STREAK | White |
| LUSTER | Vitreous, Semi-Vitreous to pearly |
| CLEAVAGE | Two Directional |
| FRACTURE | Uneven and splintery |
| HARDNESS | 6.0-6.5 |
| SPECIFIC GRAVITY | 2.55-2.76 |



CORUNDUM

Physical properties

| | |
|-------------------------|---|
| FORM | Barrel shaped, massive or Granular |
| COLOUR | Reddish, colorless ,brown, pink to red |
| STREAK | colorless |
| LUSTER | Vitreous, to dull , adamantine |
| CLEAVAGE | Absent |
| FRACTURE | Conchoidal to uneven |
| HARDNESS | 9.0 |
| SPECIFIC GRAVITY | 3.8-4.02 |



CALCITE

Physical properties

| | |
|-------------------------|--|
| FORM | Well formed crystals of rhombohedron prism, Massive or Granular |
| COLOUR | colorless or White |
| STREAK | White |
| LUSTER | Vitreous, to dull or Earthy |
| CLEAVAGE | Perfect rhombohedral |
| FRACTURE | Conchoidal |
| HARDNESS | 3 |
| SPECIFIC GRAVITY | 2.71 |



DOLOMITE

Physical properties

| | |
|-------------------------|---|
| FORM | Rhombohedral, Massive or Granular |
| COLOUR | White, shades of brown, red, gray, green |
| STREAK | White |
| LUSTER | Pearly to dull |
| CLEAVAGE | Perfect rhombohedral |
| FRACTURE | Conchoidal to uneven |
| HARDNESS | 3.5-4.0 |
| SPECIFIC GRAVITY | 2.84-2.86 |

