

Rocks – SSC Notes

1. Definition of Rocks

- **Rock:** Naturally occurring solid mass of minerals forming the Earth's crust
- **Importance:** Building material, soil formation, mineral source, industrial use

2. Types of Rocks

Rocks are classified based on formation process:

A. Igneous Rocks

- **Formation:** Cooling & solidification of magma or lava
- **Types:**
 1. **Intrusive / Plutonic** → Cooled inside Earth → Large crystals → Granite
 2. **Extrusive / Volcanic** → Cooled on surface → Fine crystals → Basalt
- **Examples:** Granite, Basalt, Obsidian
- **Occurrence in India:** Deccan Plateau (Basalt), Aravalli Hills (Granite)
- **Uses:** Construction, road building, monuments

B. Sedimentary Rocks

- **Formation:** Accumulation & compaction of sand, silt, clay, shells, organic material
- **Characteristics:** Layered, soft, fossils may be present
- **Examples:** Sandstone, Limestone, Shale
- **Occurrence in India:** Vindhyan & Gondwana regions, Rajasthan, Madhya Pradesh
- **Uses:** Cement (Limestone), building material, ornamental stone

C. Metamorphic Rocks

- **Formation:** Transformation of igneous or sedimentary rocks under high temperature & pressure
- **Characteristics:** Hard, foliated or banded
- **Examples:** Marble (from Limestone), Slate (from Shale), Gneiss (from Granite)
- **Occurrence in India:** Himalayas (Marble, Slate), South India (Gneiss)
- **Uses:** Building, sculpture, road construction

3. Rock Cycle

- Continuous process → Igneous → Sedimentary → Metamorphic → Igneous
- Driven by weathering, erosion, heat, pressure, tectonic forces

4. Important SSC Points – Rocks

- Igneous → Magma → Granite, Basalt → Construction
- Sedimentary → Layered → Limestone, Sandstone → Cement & Buildings

- **Metamorphic → High temp & pressure → Marble, Slate → Sculpture & Roads**
- **Rock cycle → Continuous transformation among rock types**
- **India Examples:**
 - **Granite → Aravalli Hills, South India**
 - **Basalt → Deccan Plateau**
 - **Limestone → Rajasthan, MP**
 - **Marble → Himachal Pradesh, Rajasthan**
 - **Slate → Himalayas**