

Syllabus Essentials



English

Weekly Compilation
[13th-19th April, 2025]

Purana Rock System

Period of Formation: Proterozoic period (~1400 to 600 million years ago). In India, the term **Purana** is used instead of Proterozoic.

Features:

- Sedimentary metamorphic formations.
- Unfossiliferous (no fossils).

Major Rocks:

- Clay, Slates, Sandstones, Limestones, Durable stones.

Location:

- Cuddapah and Kurnool districts (Andhra Pradesh).
- Southern Chhattisgarh and Aravalli range.
- Vindhyan system: From Sasaram and Rohtas (Bihar) to Chittorgarh (Rajasthan).

Significance:

- Cuddapah system: Rich in iron, manganese, copper, cobalt, nickel.
- Vindhyan system: Deposits of limestone,
- ornamental stones, pure glass-making sand.



Purana Rock System

The Purana Rock System is subdivided into two systems:

Cuddapah System:

- **Location:** Observed first in Cuddapah district, Andhra Pradesh.

Rock Characteristics:

- Deposited in **synclinal basins**.
- **Unfossiliferous** rocks.
- Rocks include **clay, slates, sandstones, limestones**.
- **Significance:** Contains ores of **iron, manganese, copper, cobalt, nickel**.

Vindhyan System:

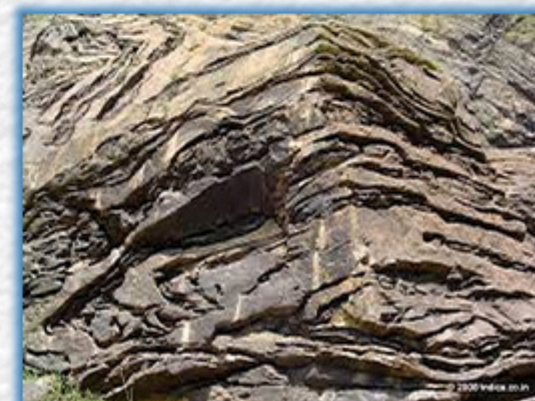
- **Location:** Found in **Chhattisgarh, Karnataka, Andhra Pradesh**, and extends to parts of **Bihar and Rajasthan**.

Rock Characteristics:

- Ancient **sedimentary rocks** with **4000 m thickness**.
- **Unfossiliferous** and devoid of recognizable fossils.
- Occupies an area of **100,000 sq. km**.

Significance:

- **Diamond-bearing regions** (e.g., Panna and Golconda diamonds).
- Rich in **durable stones, ornamental stones, limestone, and glass-making sand**.



Dravidian Rock System (Palaeozoic)

Period of Formation: 600 to 300 million years ago (Palaeozoic Era).

Features:

- Marked the **onset of coal formation**, particularly **high-quality Carboniferous coal** (though abundant deposits are not found in India).
- These rocks are **abundant in fossils**, signaling the early stages of coal formation.

Major Rocks:

- **Shales, Sandstones, Clays, Quartzites, Slates, Salts, etc.**

Location:

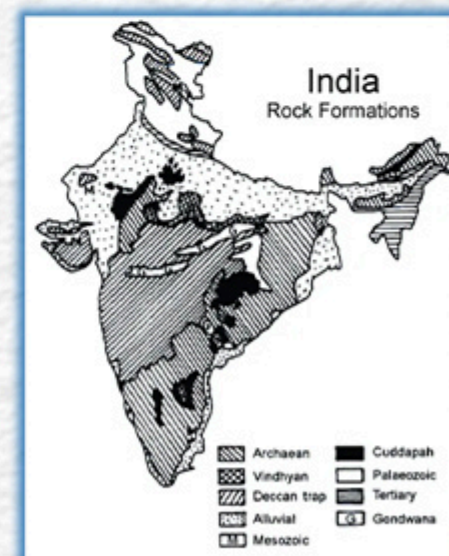
Primarily found in the **Extra Peninsular region** (rarely in the Peninsular region).

Major regions include:

- **Anantnag** (Kashmir)
- **Spiti, Kangra, Shimla** (Himachal Pradesh)
- **Handwara, Lider Valley, Garhwal, Kumayun** (Uttarakhand) **Pir Panjal** (Jammu & Kashmir)

Significance:

- Contains important **minerals** like **shale, sandstones, clays, quartzites, salts, talc, dolomite, marble, and coal.**



Classification of the Dravidian Rock System

Cambrian Rocks:

- Best developed in the **northwest Himalayan region**.

Ordovician Rocks:

- Include **quartzites, grits, and sandstones**.

Silurian Rocks:

- Found in the **Lahoul and Spiti Valleys**, consisting mainly of **limestones and shales**.

Devonian Rocks:

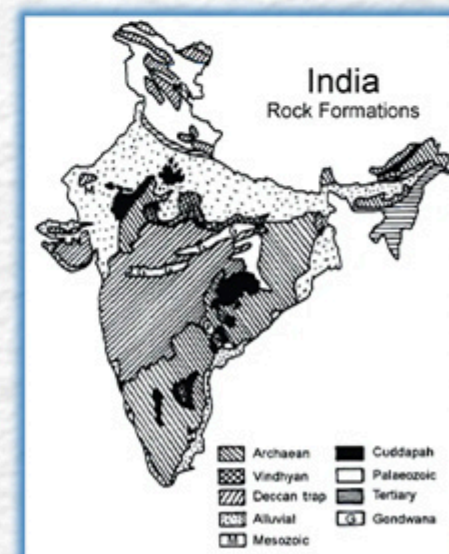
- Devoid of fossil fuel remains.

Carboniferous Rocks:

- Formed around **350 million years ago** and are **coal-bearing**.
Marked the start of coal formation.

Divided into three types:

- **Upper Carboniferous:** Composed mainly of **limestone and dolomite**. Mount Everest is made of **Upper Carboniferous limestones**.
- **Middle Carboniferous:** Found in **Spiti Valley, Kashmir, Shimla, etc.**
- **Lower Carboniferous:** Composed of various types of **slates**.





Stay Tuned!