

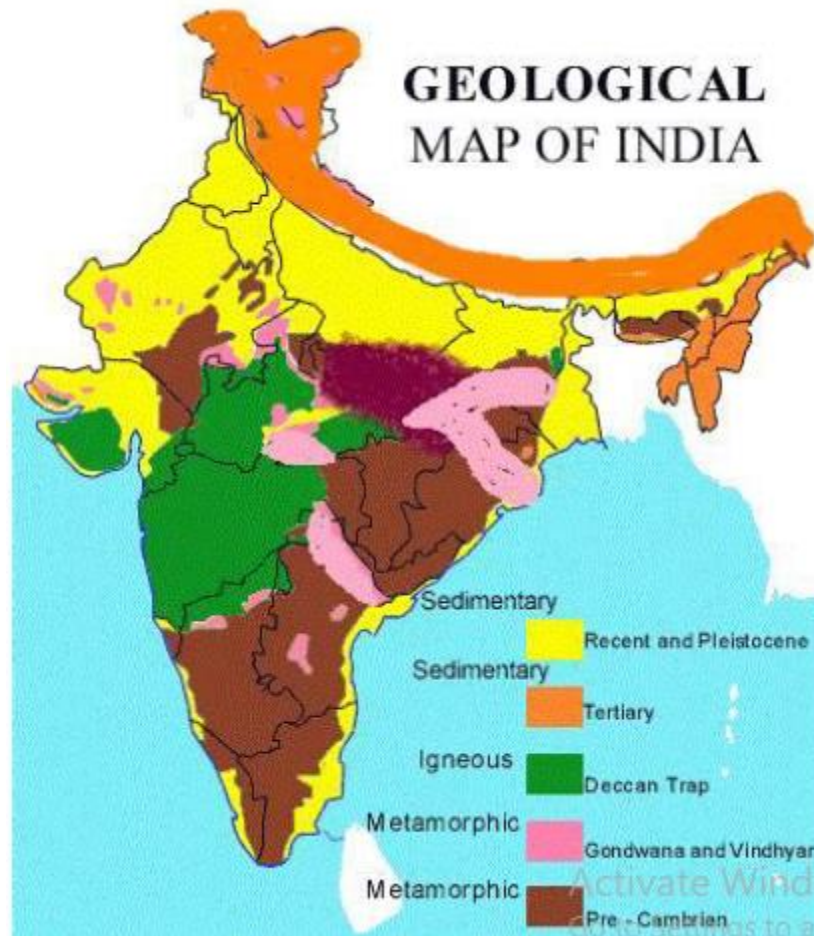


## ARCHEAN ROCK SYSTEM

- Archean Gneisses
  - **Oldest** (4 billion yrs)>> thus '**Basement Complex**'
  - **Foliated**
  - **Crystalline** due to Volcanic Origin
- Dharwar System
  - Formed due to metamorphosis of sediments of archean gneisses>> thus highly **Metamorphosed**>> **Oldest metamorphic** rocks
  - Abundance>> **Karnataka**
  - Economically **most imp**

## PURANA ROCK SYSTEM

- Cuddapah system
  - Unfossiliferous clay, slates, sandstones and limestones which was deposited in **Synclinal basin**>> Cuddapah
  - Large deposit of **cement grade limestone**
- Vindhyan system
  - Ancient **sedimentary rocks** superimposed on archean base
  - **Unfossiliferous**
  - Large area>> **Deccan trap**
  - **Diamond bearing** regions>> **Panna** and **Galconda**
  - Devoid of metalliferous minerals



### DRAVIDIAN ROCK SYSTEM

- Note- Dravidian>>**But NOT** in peninsula
  - **Extra-Peninsular** (Himalayas and Ganga plain)
  - Abundant **Fossils**
- Carboniferous rocks
- **Limestone, shale and quartzite**
  - **Coal bearing** (but Indian coal is **not** of carboniferous age)

### ARYAN ROCK SYSTEM

- Gondwana System
- These are deposits in **synclinal** troughs of ancient plateau surface
  - **98% of Indian Coal**
  - Much younger than carboniferous>> thus **low carbon content**
  - Also rich in Iron ore, Copper, uranium

- Jurassic system
  - **Marine transgression** in later part of Jurassic age gave rise to thick series of **shallow water deposits** in RJ and Kutchh
  - Also in **Guntur** and **Rajahmundry**
  
- Deccan Traps
  - **Volcanic outburst**
  - Thickness:
    - 3,000m in West
    - 600-800m in South
    - 150m in East
  
- Tertiary System
  - Upliftment of **Himalayas**

ROCK TYPE	REGION	FEATURE								
Archean Formation	1. Aravalli hills 2. 2/3 <sup>rd</sup> of deccan region 3. Part of north-east	1. Oldest rock on earth 2. Azoid (devoid any remnant of life) 3. abundant metallic and non metallic resources								
Dharwar System	Aravallis, TN, Chotanagpur, Meghalaya, Delhi	1. first metamorphic sedimentary rock in India 2. rich in Iron ore, Manganese, lead, zinc, gold, silver 3. Series in Dharwar <table><tr><td>Champion</td><td>Kolar gold fields</td></tr><tr><td>Champaner</td><td>Baroda, green marble</td></tr><tr><td>Closepet</td><td>Balaghat and chhindwara, Copper ores</td></tr><tr><td>Chilpi</td><td>Around Closepet series</td></tr></table>	Champion	Kolar gold fields	Champaner	Baroda, green marble	Closepet	Balaghat and chhindwara, Copper ores	Chilpi	Around Closepet series
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		Iron-ore	Singhbhum, Mayurbhanj, Keonjhar	
Cuddapah System	AP, CH, RJ, Delhi and lesser himalayas	1. Metamorphic rocks: Sandstone, Shale, Limestone, quartzite, slate		
Gondwana System	Damodar, Sone valley + Rajmahal hills	1. Major COAL deposits		
Tertiary system	Northern plains, Karewas, Bhangar, Khadar, Eastern ghats, Konkan, Kachh, Nilgiri	1. Upliftment of Tethys sea 2. reserves of petroleum and NG		