

**INTERMEDIATE – SYLLABUS
Geology, (w.e.f. 2010 – 11)**

Paper – II

I. PETROLOGY

1. Rock Types:- Igneous, sedimentary and Metamorphic rocks; Rock cycle; characteristics of the rocks.
2. Igneous Rocks:- Forms of igneous rocks - Intrusive & extrusive forms; structures of igneous rocks; Textures of igneous rocks; classification of igneous rocks; introduction to origin of igneous rocks; Description of igneous rocks: Granite, syenite, Diorite, Gabbro, Dunite, Dolerite, Peridotite, Pegmatite, Andesite and Basalt.
3. Sedimentary Rocks: Formation of sedimentary rocks; structures of sedimentary rocks, Textures of sedimentary rocks; classification of sedimentary rocks – Clastic, Non-clastic and Residual rocks. Description of sedimentary rocks: Breccia, conglomerate, sand stone, shale, Lime stone and Laterite.
4. Metamorphic Rocks: Metamorphism; Agents and types of metamorphism; Zones of metamorphism; classification of metamorphic rocks; Structures and textures of metamorphic rocks; Description of Metamorphic rocks:- slate; Marble; Quartzite; Schist; Gneiss; charnockite and khondalite.

II. Economic Geology:

1. Introduction - Classification of mineral deposits.
2. Processes of formation of mineral deposits: Magmatic, Hydrothermal, Residual and Mechanical concentration, Oxidation and supergene enrichment, sublimation, Evaporation, Sedimentation, Metamorphism and Contact meta somatic processes.
3. Metallic Minerals: origin, occurrence, distribution and uses of the following minerals:
Gold; Iron; Manganese; Chromium; Copper; Lead & Zinc and Aluminium.
4. Non - Metallic Minerals: Origin, occurrence, distribution and uses of the following minerals:

Muscovite Mica, Asbestos, Barite, Talc, Gypsum, Quartz, Corundum and Graphite.

5. Fuels: Coal - Types and formation of coal; Distribution of coal in India.
Petroleum & Natural Gas – Formation, Distribution of Petroleum & Natural Gas in India.
6. Mineral riches of A.P.

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III. Stratigraphy and Indian Geology:

1. Introduction: Definition, objectives & Scope;
2. Introduction to Principles of Stratigraphy and Correlation
3. Geological Time scale.
4. Physiographic divisions of India
5. Archeans – Succession and Mineral Wealth of Archeans
6. Cuddaphas – Succession and Economic importance of Cuddaphas
7. Vindhyaans – Succession and Economic importance of Vindhyaans;
Kurnool System
8. Gondwanas – Classification, Plant fossils and Economic importance of Gondwanas
9. Cretaceous system
10. Deccan Traps – Classification, Age and Economic importance of Deccan Traps
11. Siwalicks – Succession and Mammalian Fossils of Siwalicks

IV. Palaeontology:

1. Introduction – Definition of fossil; Conditions for Fossilisation; Modes of Preservations of Fossils and Importance of Fossils
2. Classification, Morphological Characteristics and importance of the following:
 - i) Corals
 - ii) Brachiopods

- iii) Pelecypods
- iv) Gastropods
- v) Cephalopods
- vi) Trilobites
- vii) Echinoids
- viii) Plant fossils

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