## III Year - II Semester 20CE6112

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# ENGINEERING GEOLOGY LAB

#### **COURSE OBJECTIVES**:

Students will have to:

- Study the physical properties and identification of minerals referred under theory.
- Study the megascopic description and identification of rocks referred under theory.
- Interpret and draw the sections geological maps showing tilted beds, faults, unconformities etc.,
- Solve structural geological problems
- Learn the method of Electrical Resistivity Meter Survey & Site visit observations & Dip Strike

## **COURSE OUTCOMES**:

Students will be able to

- Identify minerals like Muscovite, Biotite, Asbestos etc. from physical tests
- Identify rocks like Shale, Limestone, Gneiss, Schist etc. from megascopic studies
- Interpret sections for geological maps showing tilted beds, faults, unconformities etc.
- Draw sections for geological maps showing tilted beds, faults, unconformities etc.
- Compute thicknesses, dip and strike of structural geological beds

#### LIST OF EXPERIMENTS

- 1. Study of physical properties and identification of minerals referred under theory.
- 2. Megascopic description and identification of rocks referred under theory.
- 3. Interpretation and drawing of sections for geological maps showing tilted beds, faults, unconformities etc.
- 4. Simple Structural Geology problems.
- 5. Electrical Resistivity Meter Survey
- 6. Site visit (Strike & Dip observations)

## LAB EXAMINATION PATTERN:

- 1. Description and identification of Physical properties of Minerals. Study of physical properties of following common rock forming minerals:Feldspar, Quartz, Flint, Jasper, Olivine, Augite, Hornblende, Muscovite,Biotite, Asbestos, Chlorite, Kyanite, Garnet, Talc, Calcite. Study of other common economic minerals such as Pyrite, Hematite, Magnetite, Chromite, Galena, Pyrolusite, Graphite, Magnesite, and Bauxite.
- 2. Description and identification of Six Rocks (including igneous, sedimentary and metamorphic rocks), Their distinguishing features, Megascopic study of Granite, Dolerite, Basalt, Pegmatite, Laterite, Conglomerate, Sand Stone, Shale, Limestone, Gneiss, Schist, Quartzite, Marble and Slate.
- 3. Interpretation of a Geological map along with a geological section, tilted beds, faults, unconformities etc..
- 4. Simple strike and Dip problems

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	2	-	-	-	-	-	-	-	-	-	-	2	2	-	2
CO2	2	-	-	-	-	-	-	-	-	-	-	2	2	-	2
CO3	2	-	-	-	-	-	-	-	-	-	-	2	2	-	2
<b>CO4</b>	2	-	-	-	-	-	-	-	-	-	-	2	2	-	2
CO5	2	-	-	-	-	-	-	-	-	-	-	2	2	-	2