

Civil Engineering Department

1. Material Testing LAB

Major Equipment's (Costing more than ₹ 50,000)

Universal testing machine

List of experimental set up

- Tension test on steel
- Hardness test on metal.
- Modulus of elasticity of simply supported beam.
- Shear test on metal by Universal testing machine.
- Unsymmetrical bending apparatus.
- Torsion test on metal
- Flexural test on tile
- Impact test on metal



2. Surveying LAB

Major Equipment's (Costing More Than ₹ 50000)



Total station (Pentax- mode R-326)

List of experimental set up

- Theodolite Traverse Survey Project.
- Tacheometric Contouring Projects.
- Use of Box Sextant and Abney Level.
- Study of One Second Theodolite.
- Study of Mirror Stereoscope.
- Study of EDM /total station.
- Solution of Three Points Problem In Plane Tabling.
- Hydrographic Survey - Study of Nautical Sextant.



- Chaining and ranging a line with location sketches of stations.
- Observation of bearing and calculations of included angles.
- Leveling by rise and fall collimation method.
- Plane table survey of a closed traverse of min. four sides.

| 3. Environmental Engineering LAB | |
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| List of major equipment (Costing more than ₹ 50,000) | Nil |
| List of experimental set up | |
| <ul style="list-style-type: none"> • Determination of various forms of alkalinity. • Determination of turbidity and optimum dose of alum. • Determination of chlorine demands. • Determination of chloride, fluoride and sulphate. • M.P.N. T EST. • Dissolve oxygen and B.O.D. • Determination of solids. - Total, suspended volatile, settable and non-settable. • C.O.D. • Conductivity and microscopic study of organism. |  |
| 4. Geotechnical Engineering Lab. | |
| List of major equipment (Costing more than ₹ 50,000) | Nil |
| List of experimental set up | |
| <ul style="list-style-type: none"> • Field density by - Core Cutter, Sand replacement and Clod method. • Sieve analysis and particle size distribution /hydrometer analysis. • Specific gravity by voluminometer/Pychnometer. | |
| <ul style="list-style-type: none"> • Liquid limit and Plastic limit. • Shrinkage limit. • Permeability by Permeameter. • Direct shear test. • Unconfined compression test. • Vane shear test. • Proctor test. • Tri-axial test. • C.B.R. Test. • Swelling test. • Consolidation test |  |

5. Concrete Technology LAB


List of major equipment's (Costing more than ₹ 50,000)

- Compression testing machine

List of experimental set up

- Fineness test on cement
- Consistency test on cement
- Soundness test on cement
- Compressive test on cement
- Impact test on aggregates.
- Crushing test on aggregates.
- Abrasion test on aggregates.
- Compressive test on cement concrete.
- Workability of concrete- slump test, compaction factor and flow test.
- Flexural strength of concrete.
- Split Tensile test of Concrete
- Concrete mix design.
- Water absorption of bricks.
- Compressive strength of bricks



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| 6. Transportation Engineering Lab | |
| List of major equipment's :- (Costing more than ₹ 50,000) | Nil |
| List of experimental set up | |
| <ul style="list-style-type: none"> • Test on road aggregates - • Aggregate crushing value test. • Hardness test. - <ul style="list-style-type: none"> Los -Angles abration test Deval abration test Dorry abration test • Aggregate impact test. • Shape test. • Specific gravity and water absorption test. Test on Bitumen - Penetration test. Ductility test. Softening point test. Viscosity test. Flash and fire point test. Marshal stability test. |  |
| 7. Fluid Mechanics Lab. | |
| List of major equipment (Costing more than ₹ 50,000) | Nil |
| List of experimental set up | |
| <ul style="list-style-type: none"> • Measurement Of Viscosity By Viscometer. • Pressure Measuring Devices. • Bouyancy By Law Of Flotation. • Study Of Bernoulli's Theorem. • Venturi And Orifice Meter. • Electrical Anology - Study Of Stream Lines. • Haleshaw Apparatus - Laminar Flow. • Orifice /Mouthpiece And Notches. • Impact Of Jet. • Flow In Open Channel. • Specific Energy And Specific Force In Open Channel. | |

- Flow Through Pipes- Laminar And Turbulent Flow.
- Drag And Lift On Aerofoils .
- Drag On Cylinders.



8. Engineering Mechanics LAB

List of experimental set up

- Determination of Efficiency Of Simple Machine.
- Determination of Reaction Of Simply Supported Beams.
- Determination of M.I. Of Fly Wheel.
- Verify Value Of 'g' Using Compound Pendulum.
- To Determine M.I. Of An Irregular Body Using Torsional Pendulum.
- Determination Of Coefficient Of Friction Of a Flat Belt Using Belt Friction Apparatus.
- Jib crane apparatus
- Universal force table



9. Engineering Geology Lab.

List of major equipments (Costing more than ₹ 50,000)

Nil

List of experimental set up

- Study of Various Minerals.
- Study of Various Rocks.
- Construction of Geological Maps And Solution Of Engineering.
- Geological Problems Such As Dams, Bridges, Canals Etc.



10. Computer Laboratory

- Computer Desktop- 34 Numbers
- Lap Top – 02 Numbers
- LCD Projector- 02 Numbers
- HP Laser Jet 1020 – 01 Numbers
- Canon Scanner – 01 Numbers

