

**CIVIL ENGINEERING DEPARTMENT  
INTEGRAL UNIVERSITY LUCKNOW  
MATERIAL TESTING LAB**

This lab allows the measurement of the properties of common construction materials which is important to insure that those materials meet the applicable code and specifications. Material measurements are made on steel, concrete, timber, brick, block, and other construction material.

S.NO.	APPARATUS NAME	IMAGE	DISCRIPTION
1.	<b>COMPRESSION TESTING MACHINE</b>		<p>This machine is used to find the compressive strength of concrete. The capacity of machine is 2000kN (200 tonnes).It is able to determine the compressive strength of concrete mixes upto M75 grade.</p>

**2. Fatigue testing machine**



This machine is used to determine fatigue strength of standard shaped specimen of metals. Fatigue is the condition whereby a material cracks or fails because of repeated (cyclic) stresses applied below the ultimate strength of the material. Fatigue failure often occurs quite suddenly with catastrophic result.

**3.**

**Compaction Factor test**



Compacting factor of fresh concrete is done to determine the workability of fresh concrete by compacting factor test as per IS: 1199 – 1959.

4.

**Impact Testing Machine  
( Izod And Charpy )**



**Izod impact testing** is an ASTM standard method of determining the impact resistance of materials. The **Charpy impact test**, also known as the **Charpy V-notch test**, is a standardized high strain-rate test which determines the amount of energy absorbed by a material during fracture

5.

**Rockwell cum Brinell  
Testing Machine**



Rockwell Cum Brinell Hardness Testing Machine used to measure hardness of metals & alloys of all kinds, hard or soft, whether round, flat or irregular in shapes.

**6. Torsion Testing Machine**



Torsion testers or torque twist test machines measure the torsional strength, stiffness and stress strain properties of materials and products that are used in torsional loading applications.

7.

**Universal Testing Machine**



A universal testing machine is used to test the tensile, compressive and Flexural strength of materials *e.g* concrete, steel and timber etc.

The capacity of machine is 1000kN (100 tonnes)