## **Building Materials Lab**



**Device Name: Manual Vicat Apparatus** 

**Used For:** To measure the Consistency, Initial and Final Setting Time of Cement Mortar.

**Experiment associated with it:** 

Consistency and setting time of cement

Courses associated with it: Building Materials



**Device Name: Gilmore Apparatus** 

**Used For:** To measure the Consistency, Initial and Final Setting Time of Cement Mortar.

**Experiment associated with it:** 

Consistency and setting time of cement

**Courses associated with it:** Building Materials



**Device Name: Vibrator** 

**Used For:** To compact the Concrete Specimens instead of tamping

**Experiment associated with it:** 

Workability of Concrete

Courses associated with it: Building Materials



**Device Name: Flow Table** 

**Used For:** To measure the workability and the degree of segregation of Concrete

**Experiment associated with it:** 

Workability of Concrete





**Used For:** To measure the workability of Concrete

## **Experiment associated with it:**

Workability of Concrete

Courses associated with it: Building Materials



**Device Name: Kelly Ball Apparatus** 

**Used For:** To measure the workability of Concrete

## **Experiment associated with it:**

Workability of Concrete

Courses associated with it: Building Materials



**Device Name: Compacting Factor Apparatus** 

**Used For:** To measure the workability of Concrete.

## **Experiment associated with it:**

Workability of Concrete

**Courses associated with it:** Building Materials



**Device Name: Universal Testing Machine** 

**Used For:** To determine the tensile strength of steel and the flexural tension of concrete

## **Experiment associated with it:**

- 1. Tensile test of steel
- 2. Destructive tests of concrete (Flexural test)



#### **Device Name: Rebound Hammer**

**Used For:** Non-destructive method; To determine the compressive strength of cubic concrete specimens.

# **Experiment associated with it:**

Non-Destructive tests of concrete

**Courses associated with it:** Building Materials



#### **Device Name: Ultrasonic Concrete Tester**

**Used For:** Non-destructive method; To determine the compressive strength of cubic concrete specimens.

## **Experiment associated with it:**

Non-Destructive tests of concrete

**Courses associated with it:** Building Materials



# **Device Name: Compression Testing Machine**

**Used For:** To determine the compressive and splitting strength of different sizes and shapes of concrete.

#### **Experiment associated with it:**

Destructive tests of concrete (Compression test)

**Courses associated with it:** Building Materials



## **Device Name: Hand Operating Testing Machine**

**Used For:** To determine the comp. strength of specific cubic and cylindrical concrete specimens.

## **Experiment associated with it:**

Destructive tests of concrete (Compression test)



# **Device Name: Splitting Tensile Device**

**Used For:** To fix cylindrical concrete specimens; to measure the splitting tensile strength using the comp. testing machine.

# **Experiment associated with it:**

Destructive tests of concrete (Split test)

**Courses associated with it:** Building Materials



# **Device Name: Los Angeles Testing Machine**

**Used For:** To determine the abrasion loss percent (wearing percent) of coarse aggregates (indication of the hardness).

**Experiment associated with it:** L.A. Abrasion test

Courses associated with it: Building Materials



#### **Device Name: Mortar Mixer**

**Used For:** To mix the cement mortar constituents together (To obtain a homogeneous mix; cement, sand and water).

#### **Experiment associated with it:**

- 1. Consistency and setting time of cement
- 2. Strength of mortar

Courses associated with it: Building Materials



#### **Device Name: Concrete Drum Mixer**

**Used For:** To mix the concrete constituents homogeneously together.

## **Experiment associated with it:**

Workability of Concrete

	Device Name: Sieve Shaker
	<b>Used For:</b> To determine the Aggregate size distribution.
	<b>Experiment associated with it:</b> Sieve Analysis
	<b>Courses associated with it:</b> Building Materials
	Device Name: Core Drilling Equipment
	<b>Used For:</b> To take cylindrical cores from a structure.
	Experiment associated with it: Core Drilling
	Courses associated with it: Building Materials
	Device Name: Flexural Tension Machine
	<b>Used For:</b> To determine the tensile strength of Cement Mortar briquettes.
	<b>Experiment associated with it:</b> Tensile Strength of Mortar
	Courses associated with it: Building Materials
	Device Name: Ovens
	<b>Used For:</b> To dry various specimens of aggregates, Sandetc
	Experiment associated with it: 3. Specific gravity and absorption 4. Sieve Analysis 5. L.A. Abrasion test
	<b>Courses associated with it:</b> Building Materials

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