

## **31055 CONSTRUCTION PRACTICE LAB**

### DETAILED SYLLABUS

#### **OBJECTIVES**

On completion of the course, the student will be familiar

- To Prepare centre line plan and foundation plan for a building.
- For Setting out foundation in the field for spread footing and column footing for a building.
- To determine the Workability of concrete by Compacting factor, slump cone test and Vee – Bee consistometer test.
- To cast Concrete cubes and to test for compressive strength.
- To determine the fineness Modulus of fine and coarse aggregate.
- For Shape test on coarse aggregate.
- To determine the bulking characteristics of the given sand.
- For Non - Destructive test on hardened concrete.

#### **LIST OF EXPERIMENTS**

##### **PART A**

1. Prepare and develop a centre line plan, foundation Plan and set out spread footing in the field for the given line sketch of a building.
2. Prepare and develop a centre line plan, foundation Plan and set out the layout of columns and footing in the field for the given line sketch of a building (Framed structure).
3. Arrangement of bricks using English bond for one brick thick wall and one and half brick thick wall for right angled corner junction.
4. Arrangement of bricks using English Bond for one brick thick wall, one and half brick thick wall for Tee junction.
5. Arrangement of bricks using English bond for one brick thick, one and half and two brick thick square pillars.
6. Cutting, hooking, cranking and arrangement of reinforcement for:
  - a. Beam
  - b. Lintel and sunshade
  - c. Column and footing

**PART B**

1. Determination of workability of concrete by slump cone test.
2. Determination of workability of concrete by compaction factor test.
3. Casting of concrete cube and compression test on concrete cube.
4. Determination of Fineness Modulus of fine aggregate sample and plot a particle size distribution curve and also find the effective size and uniformity co-efficient.
5. Determination of Fineness Modulus of coarse aggregate sample and plot a particle size distribution curve and also find the effective size and uniformity co-efficient.
6. Vee- Bee Consistometer Test on concrete.
7. Non Destructive Test on concrete - Rebound Hammer Test.
8. Determination of bulking characteristics of the given sand sample.
9. Shape Test for Coarse aggregate.
  - a. Flakiness Index test
  - b. Elongation Index test
  - c. Angularity number test