

LESSON PLAN FOR LAB (W-25)

SUBJECT – BUILDING MATERIALS & CONCRETE TECHNOLOGY LAB (PR-4)

COURSE CODE – CEPC 217

COURSE – DIPLOMA IN CIVIL ENGINEERING

SEMESTER – 3rd

LAB PERIOD – 4P / WEEK

TOTAL CONTACT HOURS – 60 HRS

FACULTY – __Sri Sashidhar Behera and Smt Smitarani Patel

S. No	Week	No. of Classes	Topic to be Covered
1	Week-1	2	Introduction to Building Materials & Concrete Technology Lab, laboratory safety, identification of construction materials and their properties
2	Week-1	2	Identification of coarse aggregates of different sizes (60 mm, 40 mm, 20 mm, 10 mm) and preparation of report
3	Week-2	4	Field visit to construction sites for identification of soil layers in foundation pit and preparation of site report with photographs
4	Week-3	2	Identification and classification of first class, second class and third class bricks based on properties
5	Week-3	2	Measurement of brick dimensions, average size, weight and field tests (dropping, striking and scratching test)

S. No	Week	No. of Classes	Topic to be Covered
6	Week-4	4	Identification of flooring tiles: vitrified, ceramic, glazed, mosaic, anti-skid tiles, chequered tiles and paving blocks
7	Week-5	4	Application of paint on wall surface: preparation of surface, painting procedure, tools and safety practices
8	Week-6	4	Preparation of cement mortar mix of proportion 1:3 and 1:6 using cement and sand
9	Week-7	4	Determination of fineness of cement by sieving method / Blaine air permeability apparatus
10	Week-8	4	Determination of specific gravity, standard consistency and initial & final setting time of cement
11	Week-9	4	Determination of compressive strength of cement and study of cement quality
12	Week-10	4	Determination of bulking of sand and bulk density of fine and coarse aggregates
13	Week-11	4	Determination of water absorption of fine and coarse aggregates and sieve analysis of fine

S. No	Week	No. of Classes	Topic to be Covered
14	Week-12	4	aggregate for fineness modulus Determination of workability of concrete by slump cone test and compaction factor test
15	Week-13	4	Concrete mix design as per IS 10262:2019 and preparation of concrete mix of required grade
16	Week-14	4	Determination of compressive strength of concrete cubes at 7 and 28 days and analysis of results
17	Week-15	4	Demonstration of Non-Destructive Testing (NDT) equipment and study of concrete quality assessment

Faculty Civil: _____

Rali
18/8/25

HOD Civil: _____

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