

## LESSON PLAN

Discipline: Civil Engg. , UGMIT Rayagada  
Semester: 3<sup>rd</sup>  
Name of the Teaching Faculty: DEBABRATA CHHURIA  
Lecturer Stage 1  
Subject: **BUILDING MATERIALS &  
CONSTRUCTION LAB**  
(CEPC217)  
No of Days/week class allotted: 4  
Session: 2025-26

Week	Class Day	Theory/Practical Topics	Remarks
1	1-5	<ol style="list-style-type: none"><li>1. Identify various sizes of available coarse aggregates from sample of 10 kg in laboratory and prepare report (60,40, 20,10 mm)</li><li>2. Identify various layers and types of soil in foundation pit by visiting at least 3 construction sites in different locations of city and prepare report consisting photographs and samples.</li></ol>	
2	6-8	<ol style="list-style-type: none"><li>3. Select first class, second class and third-class bricks from the stake of bricks and prepare report based on its properties. 28</li><li>4. Measure dimensions of 10 bricks and find average dimension and weight. Perform field tests - dropping, striking and scratching by nail and correlate the results obtained.</li></ol>	
3	9-12	<ol style="list-style-type: none"><li>5. Identify different types of flooring tiles such as vitrified tiles, ceramic tiles, glazed tiles, mosaic tiles, anti- skid tiles, chequered tiles, paving blocks and prepare report about the specifications.</li><li>6. Apply two or more coats of selected paint on the prepared base of a given wall surface for the area of 1m x 1m using suitable brush/rollers adopting safe practices.</li></ol>	
4	13-16	<ol style="list-style-type: none"><li>7. Prepare the cement mortar of proportion 1:3 or 1:6 using cement and sand only.</li></ol>	
5	17-20	<ol style="list-style-type: none"><li>8. Determine fineness of cement by Blaine's air permeability apparatus Or by sieving.</li></ol>	
6	21-24	<ol style="list-style-type: none"><li>9. Determine specific gravity, standard consistency, initial and final setting times of cement. .</li></ol>	

7	25-28	10. Determine compressive strength of cement	
8	29-32	11. Determine bulking of sand.	
9	33-36	12. Determine bulk density of fine and coarse aggregates.	
10	37-40	13. Determine water absorption of fine and coarse aggregates. .	
11	41-44	14. Determine Fineness modulus of fine aggregate by sieve analysis	
12	45-48	15. Determine workability of concrete by slump cone test.	
13	49-52	16. Determine workability of concrete by compaction factor test.	
14	53-56	17. To prepare concrete mix of a particular grade as per IS 10262:2019 and determine compressive strength of Concrete for 7 and 28 days.	
15	57-60	18. Demonstration of NDT equipment	

Signature of Faculty:

Signature of HOD:

  
14/07/25