

Lesson Plan

Course - Building Material and Concrete Technology Lab(Pr-4)

Semester- 3rd

Program- Civil Engineering

Institute - Govt. Polytechnic, Sonpur

Session - 2026-2027

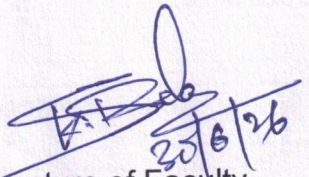
Total Load-60(4/week)

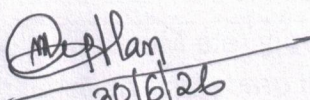
Sl. No.	Week No.	Class No.	Topic to be Covered
1	Week-1	Class-1	Identification of various sizes of coarse aggregates (60, 40, 20 & 10 mm) – Sample examination
2	Week-1	Class-2	Identification of coarse aggregates – Classification and observation
3	Week-1	Class-3	Identification of coarse aggregates – Measurement and comparison
4	Week-1	Class-4	Identification of coarse aggregates – Report preparation
5	Week-2	Class-5	Visit to construction site – Identification of soil layers in foundation pit (Site-1)
6	Week-2	Class-6	Visit to construction site – Identification of soil layers (Site-2)
7	Week-2	Class-7	Visit to construction site – Identification of soil layers (Site-3)
8	Week-2	Class-8	Preparation of report with photographs and soil samples
9	Week-3	Class-9	Selection of first-, second- and third-class bricks from brick stack
10	Week-3	Class-10	Identification of brick properties
11	Week-3	Class-11	Measurement of dimensions and weight of 10 bricks
12	Week-3	Class-12	Field tests on bricks (dropping, striking and scratching by nail) and correlation of results
13	Week-4	Class-1	Identification of vitrified, ceramic and glazed tiles

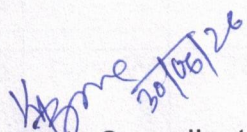
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14	Week-4	Class-1 4	Identification of mosaic, anti-skid and chequered tiles
15	Week-4	Class-1 5	Identification of paving blocks
16	Week-4	Class-1 6	Preparation of report on flooring tile specifications
17	Week-5	Class-1 7	Surface preparation for painting (1 m × 1 m wall surface)
18	Week-5	Class-1 8	Application of first coat of paint
19	Week-5	Class-1 9	Application of second/subsequent coat of paint
20	Week-5	Class-2 0	Inspection of painted surface and finish
21	Week-6	Class-2 1	Preparation of cement mortar (1:3)
22	Week-6	Class-2 2	Preparation of cement mortar (1:6)
23	Week-6	Class-2 3	Fineness of cement by Blaine's air permeability apparatus
24	Week-6	Class-2 4	Fineness of cement by sieving method
25	Week-7	Class-2 5	Specific Gravity Test of Cement
26	Week-7	Class-2 6	Standard Consistency Test of Cement
27	Week-7	Class-2 7	Initial Setting Time Test of Cement
28	Week-7	Class-2 8	Final Setting Time Test of Cement
29	Week-8	Class-2 9	Compressive Strength Test of Cement – Specimen preparation
30	Week-8	Class-3	Compressive Strength Test of Cement – Conduct of

		0	test
31	Week-8	Class-3 1	Bulking of Sand Test
32	Week-8	Class-3 2	Interpretation of bulking of sand results
33	Week-9	Class-3 3	Bulk Density of Fine Aggregate
34	Week-9	Class-3 4	Bulk Density of Coarse Aggregate
35	Week-9	Class-3 5	Water Absorption Test of Fine Aggregate
36	Week-9	Class-3 6	Water Absorption Test of Coarse Aggregate
37	Week-1 0	Class-3 7	Fineness Modulus of Fine Aggregate – Sample preparation
38	Week-1 0	Class-3 8	Sieve Analysis of Fine Aggregate
39	Week-1 0	Class-3 9	Calculation of Fineness Modulus
40	Week-1 0	Class-4 0	Interpretation of sieve analysis results
41	Week-1 1	Class-4 1	Workability of Concrete by Slump Cone Test – Sample preparation
42	Week-1 1	Class-4 2	Slump Cone Test – Conduct of test
43	Week-1 1	Class-4 3	Workability of Concrete by Compaction Factor Test – Sample preparation
44	Week-1 1	Class-4 4	Compaction Factor Test – Conduct of test
45	Week-1 2	Class-4 5	Concrete Mix Design as per IS 10262:2019 – Selection of grade and material proportioning
46	Week-1 2	Class-4 6	Preparation of Concrete Mix
47	Week-1	Class-4	Casting of Concrete Cubes

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48	Week-1 2	Class-4 8	Curing of Concrete Specimens
49	Week-1 3	Class-4 9	Compressive Strength Test of Concrete – 7-day test
50	Week-1 3	Class-5 0	Calculation and interpretation of 7-day compressive strength
51	Week-1 3	Class-5 1	Compressive Strength Test of Concrete – 28-day specimen preparation and observations
52	Week-1 3	Class-5 2	Compressive Strength Test of Concrete – 28-day test procedure
53	Week-1 4	Class-5 3	Compressive Strength Test of Concrete – 28-day testing
54	Week-1 4	Class-5 4	Calculation and interpretation of 28-day compressive strength
55	Week-1 4	Class-5 5	Demonstration of Non-Destructive Testing (NDT) Equipment
56	Week-1 4	Class-5 6	Demonstration of NDT Equipment – Observation of testing procedure
57	Week-1 5	Class-5 7	Demonstration of NDT Equipment – Interpretation of test results
58	Week-1 5	Class-5 8	Concrete Mix and Strength Test – Observation and analysis
59	Week-1 5	Class-5 9	Aggregate and Cement Test Results – Comparative analysis
60	Week-1 5	Class-6 0	Building Materials Tests – Consolidated observations and interpretation


 Signature of Faculty
 Civil Engg, GP Sonpur


 Signature of HOD
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 Academic Co-ordinator
 Civil Engg, GP Sonpur