

Lesson plan

Name of Faculty		Mr. Mohan Lal		
Discipline		Civil Engineering		
Semester		2nd		
Subject		Construction Materials		
Lesson Plan Duration		From 15 Feb 2024 to 14 June 2024		
Work load [Theory + Practical] Per Week		[04+03]		
Week	Day	Theory Topic/ Assignment/ Test	No.	Practical
1 st	1	Introduction of the subject	1	To identify the stones used in building works by visual examination
	2	Building Stone- Sources of stones, Quarrying of stones by blasting and its effect on environment and problem discussion		
2 nd	1	Dressing of stone, Requirements of good building stones, Various uses of stones in construction	2	To determine the crushing strength of bricks
	2	Artificial stone- Procedure of making an artificial stone, forms of artificial stones, Advantages of artificial stones		
3 rd	1	Bricks-Introduction to brick	3	
	2	Raw materials for brick manufacturing and properties of good brick making earth, Manufacturing of bricks, Preparation of clay (manual/mechanically)		
4 th	1	Moulding : hand moulding and machine moulding brick table; drying of bricks, burning of bricks, types of kilns (Bull's Trench Kiln and Hoffman's Kiln)	4	To determine the water absorption of bricks
	2	Sun dried brick, Traditional bricks ,Refractory bricks, fly ash brick ,hollow brick, Size and weight of standard brick, Classification and specifications of bricks as per BIS 1077		
5 th	1	Stacking of bricks and tiles at site, Tiles- bricks tiles & their uses, ceramic tiles and their uses, vitrified tiles, PVC tiles uses, Paver blocks, interlocking tiles	5	
	2	Sessional week		
6 th	1	Cement: Introduction, raw materials, flow diagram of manufacturing of cement, Various types of Cements, their uses and testing: Ordinary port land cement	6	To determine the efflorescence of bricks
	2	Properties of cement, Storage of cement site		
7 th	1	Timber and Wood Based Products: Identification and uses of different types of timber: Teak, Deodar, Shisham, Sal, Mango, Kail, Chir, Fir, Hollock,	7	To conduct a practical for dimensional tolerance of a brick
	2	Seasoning of timber: Purpose, methods of seasoning as per BIS Code, Properties of timber and specifications of structural timber, Preservation of timber and methods of treatment as per BIS, Other wood		

		based products, their brief description of manufacture and uses laminated board, gypsum board,		
8 th	1	block board, fibre board, hard board, sunmica, plywood, veneers	8	to perform the following field test on cement to judge the quality of cement
	2	paints and Varnishes: Introduction, purpose and use of paints, types of paints & varnishes		
	1	Covering capacity of various paints, characteristics of an ideal varnish, distemper		date of packing, colour , hand Inserting ,float test, smell test ,and presence of
9 th	2	properties of distemper, process of distemper	9	Report work on pop and asbestos sheet, termites ,polymers and epoxies
10 th	1	Sessional Week	10	Report work on pop and asbestos sheet, termites ,polymers and epoxies
	2			
11 th	1	Metals: Ferrous metals: Composition, properties and uses of cast iron, mild steel, HYSD steel, high tension steel as per BIS.	11	To identify various types of timbers such as: Teak, Sal, Chir, Shisham, Deodar, Kail & Hollock by visual examination only
	2	Commercial forms of ferrous, metals		
12 th	1	properties and uses of aluminium, Properties and uses of stainless Steel	12	the students should be submit a report work on the construction materials
	2	plastics- FRP Properties of applications of FRP in building industry, PVC wall Paneling, ACP & HPL Sheets		
13 th	1	Construction chemicals like water proofing compound, epoxies, polymers, Water proofing, termite proofing materials-Types & uses	13	report work on covering Paints, varnishes, and distempers, aluminium and satinless steels
	2	Materials used in interior decoration works like POP, Eco friendly materials for construction of buildings		
14 th	1	Sessional	14	
	2	Revision		
15 th	1	Revision	15	report work on covering water proofing material , PVC panels and
	2	Construction chemicals like water proofing compound, epoxies, polymers, Water proofing, termite proofing materials-Types & uses		