

Department of Civil Engineering

Name of the Faculty		Nilesh Kumar		
Semester		2 nd		
Subject		Construction Materials (Load- Th-02, Pr-4)	Delivery Date of Lecture	Remarks
Duration		20 Jan 2025 - 02 May, 2025 (15 weeks)		
Week	Lecture Day	Topic (including assignment / test)		
1st	1st	1. Building Stone : 1.1 Sources of Stone, 1.2 Quarrying of stones by blasting and its effect on environment, 1.3 Dressing of stones		
	2nd	1.4 Requirements of good building stones, 1.5 Various uses of stones in construction, 1.6 Artificial Stones: Procedure of making an artificial stone, forms of artificial stones, advantages of artificial stones		
2nd	1st	2. Bricks: 2.1 Introduction to bricks, 2.2 Raw materials for brick manufacturing and properties of good brick making earth, harmful ingredients		
	2nd	2.3 Manufacturing of bricks, 2.3.1 Preparation of clay (Manual and Mechanically), **2.3.2 Moulding: Hand moulding and machine moulding brick table: drying of bricks, burning of bricks		
3rd	1st	2.5 Sun dried bricks, Traditional bricks, Refractory bricks, Fly ash bricks, Hollow bricks, 2.6 Size and weight of standard brick.		
	2nd	2.7 Classification and specifications of bricks as per BIS: 1077 2.8 Stacking of bricks and tiles at site		
4th	1st	3. Tiles: 3.1 Brick tiles and their uses, 3.2 Ceramic tiles and their uses		
	2nd	3.3 Vitrified tiles and their uses, 3.4 PVC Tiles and uses, 3.5 Paver blocks,		
5th	1st	1st Sessional Test		
	2nd			
6th	1st	4. Cement : **4.1 Introduction, raw materials, flow diagram of manufacturing of cement, 4.2 Various types of cements, their uses and testing: Ordinary portland cement, rapid hardening cement, White cement, Portland pozzolana.		
	2nd	4.3 Properties of cement, 4.4 Storage of Cement at site		
7th	1st	5. Timber and Wood Based Products 5.1 Identification and uses of different types of timber: Teak, Deodar, Shisham, Sal, Mango, Kail, Chir, Fir, Hollock, Champ ** 5.2 Seasoning of timber: Purpose, methods of seasoning as per BIS		
	2nd	5.3 Properties of timber and specifications of structural timber 5.4 Preservation of timber and methods of treatment as per BIS		
8th	1st	5.5 Other wood based products, their brief description of manufacture and uses: Laminated Board, Block Board, Fibre Board, Hard board, Sunmica, Plywood, and Veneers.		
	2nd	6. Paints, Varnishes and Distempers: 6.1 Paints, 6.1.1 Purpose and use of paints, 6.1.2 Characteristics of an ideal paint, 6.1.3 Types of paints: Oil paints, Water paints, Cement paints and Enamel paint**, 6.1.4 Covering capacity of paints		
9th	1st	6.2 Varnishes, 6.2.1 Purpose and use of varnishes, 6.2.2 Characteristics of an ideal varnish, 6.2.3 Types of varnishes, 6.3 Distemper, 6.3.1 Properties of distemper and process of distemping.		
	2nd	2nd Sessional Test		

(Nilesh Kumar)

H.O.D.

Name of the Faculty		Nilesh Kumar	Delivery Date of Lecture	Remarks
Semester		2nd		
Subject		Construction Materials (Load -Th-02, pr-04)		
Duration		20 Jan 2025 - 02 May. 2025 (15 weeks)		
Week	Lecture Day	Topic (including assignment / test)		
10th	1st	7. Metals and Non Metals: 7.1 Ferrous metals: Composition, properties and uses of cast iron, mild steel, HYSD steel, high tension steel as per BIS., 7.2 Commercial forms of ferrous, metals		
	2nd	7.3 Properties and use of Al, 7.4 Properties and use of Stainless Steel.		
11 th	1st	8. Plastics: 8.1 FRP: Introduction, Properties of FRP and Applications of FRP in Building Industry		
	2nd	8.2 PVC wall paneling, 8.3 ACP and HPL Sheets		
12th	1st	9. Miscellaneous Materials: 9.1 Asbestos: Introduction, properties and use of asbestos., 9.2 Types and uses of insulating materials for sound and thermal insulation,		
	2nd	9.3 Construction chemicals like water proofing compound, epoxies, polymers		
13th	1st	9.4 Water proofing and termite proofing materials – types and uses		
	2nd	9.5 Materials used in interior decoration works like POP, methods of doing POP,		
14th	1st	9.6 Eco friendly materials for construction of buildings.		
	2nd	3rd Sessional Test		
15th	1st	Revision		

Subject incharge

(Nilesh Kumar)

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