

LESSON PLAN

NAME OF FACULTY:- SACHIN SHARMA
 SUBJECT:- CONSTRUCTION MATERIALS (C.M.)
 BRANCH:- CIVIL ENGG.
 SEMESTER:- 2nd
 DURATION:- 15 Weeks

| Sno. | Theory | | Practical | |
|------|-------------|--|---------------|---|
| | Lecture Day | Topic | Practical Day | Topic |
| 1. | 1. | Sources of stones , Quarrying of stones by blasting and its effect on environment | 1. | To identify stones used in building works by visual examination. |
| | 2. | Dressing of stones , Requirements of good building stones | 2. | Do |
| | | | 3. | Do |
| | | | 4. | Do |
| 2. | 1. | Various uses of stones in construction , Artificial stones: Procedure of making an artificial stone, forms of artificial stones, advantages of artificial stones. | 1. | To determine the crushing strength of bricks. |
| | 2. | Introduction to bricks , Raw materials for brick manufacturing and properties of good brick making earth | 2. | Do |
| | | | 3. | Do |
| | | | 4. | Do |
| 3. | 1. | Manufacturing of bricks , Burning of bricks : Bull's trench kiln, Hoffmann's Kiln | 1. | To determine the water absorption of bricks. |
| | 2. | Sun dried bricks, Traditional bricks, Heteractory bricks, Fly ash bricks, Hollow brick , Size and weight of standard brick | 2. | Do |
| | | | 3. | Do |
| | | | 4. | Do |
| 4. | 1. | Classification and specifications of bricks as per BIS:1077 , Stacking of bricks and tiles at site. | 1. | To determine the efflorescence of bricks. |
| | 2. | Brick tiles and their uses , Ceramic tiles and their uses | 2. | Do |
| | | | 3. | Do |
| | | | 4. | Do |
| 5. | 1. | Vitrified tiles and their uses , PVC tiles and uses | 1. | To conduct a practical for dimensional tolerances of a brick. |
| | 2. | Paver blocks, interlocking tiles. , Introduction, raw materials, flow diagram of manufacturing of cement | 2. | Do |
| | | | 3. | Do |
| | | | 4. | Do |
| 6. | 1. | Various types of cements, their uses and testing : Ordinary portland cement, Rapid hardening cement, White cement, Portland pozzolana cement | 1. | Date of packing, Colour, Hand insertion, Float test, Smell test and Presence of lumps |
| | 2. | Properties of cement , Storage of cement at site | 2. | Do |
| | | | 3. | Do |
| | | | 4. | Do |
| 7. | | 1ST SESSIONAL TEST | | 1ST SESSIONAL TEST |
| 8. | 1. | Identification and uses of different types of timber:- Teak, Deodar, Shisham, Sal, Mango, Kail, Chir, Fir, Hollock, Champ , Seasoning of timber:- Purpose, methods of seasoning as per BIS code | 1. | To perform the following field tests on cement to judge the quality of cement. |
| | 2. | Properties of timber and specifications of structural timber , Preservation of timber and methods of treatment as per BIS | 2. | Do |
| | | | 3. | Do |
| | | | 4. | Do |
| 9. | 1. | Other wood based products, their brief description of manufacture and uses : Laminated board, Block board, Fibre board, Hard board, Sunmica, Plywood, and Veneers. Paints:- Purpose, uses, Characteristics and Types of paints | 1. | To identify various types of timbers such as ; Teak, Sal, Chir, Shisham, Deodar, Kail & Hollock by visual examination only. |

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| | 2. | Purpose, uses, Characteristics and Types of varnishes , Properties of distemper and process of distempering | 2. | Do |
| | | | 3. | Do |
| | | | 4. | Do |
| 10. | 1. | Ferrous metals : Composition, properties and uses of cast iron, mild steel, HYSD steel, high tension steel as per BIS , Commercial forms of ferrous metals | 1. | To identify stones used in building works by visual examination. |
| | 2. | Properties and uses of aluminium , Properties and uses of stainless steel. | 2. | Do |
| | | | 3. | To determine the crushing strength of bricks. |
| | | | 4. | Do |
| 11. | 1. | Introduction, Properties and applications of FRP in building industry , PVC wall paneling , ACP and HPL sheets | 1. | To determine the water absorption of bricks. |
| | 2. | Introduction, properties and uses of asbestos , Types and uses of insulating materials for sound and thermal insulation | 2. | Do |
| | | | 3. | To determine the efflorescence of bricks. |
| | | | 4. | Do |
| 12. | | 2ND SESSIONAL TEST | | 2ND SESSIONAL TEST |
| 13. | 1. | Construction chemicals like water proofing compound, epoxies , Water polymers proofing and termite proofing materials-types and uses | 1. | To conduct a practical for dimensional tolerances of a brick. |
| | 2. | Materials used in interior decoration works like POP, methods of doing POP , Eco-friendly materials for construction of buildings | 2. | Do |
| | | | 3. | Date of packing, Colour, Hand insertion, Float test, Smell test and Presence of lumps |
| | | | 4. | Do |
| 14. | | revision | | revision |
| 15. | | 3RD SESSIONAL TEST | | 3RD SESSIONAL TEST |