

| <b>LESSON PLAN</b>   |                 |            |   |  |                          |
|--|-----------------|------------|---|--|--------------------------|
| <b>Academic Session :- 2022-2023</b>   |                 |            |   |  |                          |
| Subject: Building Material and Construction Technology(Th.3)   |                 |            | Semester from Date:15/09/2022to 22/12/2022      |  |                          |
| Semester: 3rd  | No. of weeks:14 |            | Teaching faculty:C.M.Swarupa Nanda              |  | 5P/week                  |
| No. of Days/week class allotted:05 Period per week( Monday, Tuesday, Wednesday, Thursday, Friday: 1p.each) |                 |            |   |  | <b>Total period: 75</b>  |
| MONTH  | Week            | DATE       | DAYS/PERIOD                                     | Syllabus to be covered   | NO. OF PERIODS AVAILABLE |
|  |                 |            |   | <b>PART:A( BUILDING MATERIALS)</b>   |                          |
|  |                 |            |   | <b>CHAPTER-STONE-5P</b>  |                          |
| <b>S<br/>E<br/>P<br/>T<br/>E<br/>M<br/>B<br/>E<br/>R</b>   | 3rd             | 15.9.2022  | Thursday  | 1.1 Classification of rock, uses of stones, natural bed of stones                    | 1                        |
|  |                 | 16.9.2022  | Friday  | 1.2 Quality of good building stones  | 1                        |
|  | 4th             | 19.9.2022  | Monday  | 1.3 Dressing of stones   | 1                        |
|  |                 | 20.9.2022  | Tuesday   | 1.4 Characteristics of different types of stones                                     | 1                        |
|  |                 | 21.9.2022  | Wednesday                                       | 1.5 Uses of different type of stones   | 1                        |
|  |                 |            |   | <b>CHAPTER-2-BRICKS-6P</b>   |                          |
|  |                 | 22.9.2022  | Thursday  | 2.1. Brick earth- Its composition  | 1                        |
|  |                 | 23.9.2022  | Friday  | 2.2.Brick making- preparation of brick earth   | 1                        |
|  | 5th             | 26.9.2022  | Monday  | 2.3.Moulding, Drying   | 1                        |
|  |                 | 27.9.2022  | Tuesday   | 2.4.Burning in kilns(continuous process)   | 1                        |
|  |                 | 28.9.2022  | Wednesday                                       | 2.5.Classification of bricks   |                          |
|  |                 | 29.9.2022  | Thursday  | 2.6.size of traditional and modular bricks, quality of good building bricks          | 1                        |
|  |                 |            | <b>CHAPTER-3- CEMENT MORTAR AND CONCRETE-7P</b> |  |                          |
|  |                 | 30.9.2022  | Friday  | 3.1. Cement: Type of cement, Properties, manufacturing of cement                     | 1                        |
|  |                 | 10.10.2022 | Monday  | 3.2.Importance and application of blended cement with fly ash and blast furnace slag | 1                        |

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| 3rd  | 11.10.2022 | Tuesday   | 3.3.Mortar: Defination and type of mortar   | 1 |
|      | 12.10.2022 | Wednesday | 3.4.Source and classification of sand, bulking of sand  | 1 |
|      | 13.10.2022 | Thursday  | 3.5.Use of gravel, morrum and fly ash as different building material                              | 1 |
|      | 14.10.2022 | Friday    | 3.6. Concrete: Defination and composition, Water cement ratio-Workability,mechanical properties   | 1 |
| 4th  | 17.10.2022 | Monday    | 3.7.grading of aggregates, mixing and placing, curing of concrete                                 | 1 |
|      |            |           | <b>CHAPTER-4-OTHER CONSTRUCTION MATERIAL-7P</b>   |   |
|      | 18.10.2022 | Tuesday   | 4.1.Timber: Classification and Structure  | 1 |
|      | 19.10.2022 | Wednesday | 4.2.Seasoning of timber- Importance   | 1 |
|      | 20.10.2022 | Thursday  | 4.3.Characteristics of good timber.   | 1 |
|      | 21.10.2022 | Friday    | 4.4.Clay products and refractory materials- Definition and Classification                         | 1 |
| 5th  | 25.10.2022 | Tuesday   | 4.5.Property and uses of refractory material- tiles , terracotta                                  | 1 |
|      | 26.10.2022 | Wednesday | 4.6. Porcelain glazing; Iron and steel. Uses of cast iron, wrought iron, mild steel and tor steel | 1 |
|      | 27.10.2022 | Thursday  | Class test  | 1 |
|      |            |           | <b>CHAPTER-5-SURFACE PROTECTIVE MATERIAL-5P</b>   |   |
|      | 28.10.2022 | Friday    | 5.1.Composition of paint, enamels   | 1 |
| Last | 31.10.2022 | Monday    | 5.2.Composition of varnishes  | 1 |
| 1ST  | 1.11.2022  | Tuesday   | 5.3. Type and uses of surface protective material like paints, Enamels                            | 1 |
|      | 2.11.2022  | Wednesday | 5.4.Varnishes, Distempers   | 1 |
|      | 3.11.2022  | Thursday  | 5.5.Emulsion, french polish and Wax Polish  | 1 |

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|     |            | <b>PART:B(CONSTRUCTION TECHNOLOGY)</b> |  |   |
|     |            | <b>CHAPTER-1-INTRODUCTION-2P</b>       |  |   |
|     | 4.11.2022  | Friday                                 | 1.1.Building and classification of buildings based on occupancy  | 1 |
| 2ND | 7.11.2022  | Monday                                 | 1.2.Different components of a building, site investigation- objectives, site reconnaissance and exploration  | 1 |
|     |            |  | <b>CHAPTER-2- FOUNDATION-4P</b>  |   |
|     | 9.11.2022  | Wednesday                              | 2.1.Concept of foundation and its purpose  | 1 |
|     | 10.11.2022 | Thursday                               | 2.2. Types of foundations- shallow and deep  | 1 |
|     | 11.11.2022 | Friday                                 | 2.3.Shallow foundation-construction details of: Spread foundations for walls, thumb rule for depth and width of foundation and thickness of concrete block   | 1 |
| 3RD | 14.11.2022 | Monday                                 | 2.4.Deep foundations: Pile foundations- their suitability, classification of piles based on materials, function and method of installation   | 1 |
|     |            |  | <b>CHAPTER-3-WALLS AND MASONRY WORKS- 6P</b>   |   |
|     | 15.11.2022 | Tuesday                                | 3.1.Purpose of walls, classification of walls-load bearing, non-load bearing walls, retaining walls.   | 1 |
|     | 16.11.2022 | Wednesday                              | 3.2. Classification of walls as per material of construction:  | 1 |
|     | 17.11.2022 | Thursday                               | 3.3.Partition walls: Suitability and uses of brick and wooden partition walls  | 1 |
|     | 18.11.2022 | Friday                                 | 3.4.Brick masonry: Definition of different terms, Bond-meaning and necessity: English bond for 1and 1-1/2 brick thick walls. T, X and right angled corner junctions, Thickness for 1and 1-1/2 brick square pillars in English bond | 1 |
|     | 21.11.2022 | Monday                                 | 3.5.Stone masonry  | 1 |

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| 4TH | 22.11.2022 | Tuesday   | 3.6.Glossary of terms- string course, corbel, cornice, block-in-course, grouting, mouldings, templates, throating, through stones, parapet, coping, pilaster and buttress                       | 1 |
|     |            |           | <b>CHAPTER-4-DOORS, WINDOWS AND LINTELS-4P</b>  |   |
|     | 23.11.2022 | Wednesday | 4.1.Glossary of terms used in doors and windows   | 1 |
|     | 24.11.2022 | Thursday  | 4.2.Doors-different types of doors  | 1 |
|     | 25.11.2022 | Friday    | 4.3. Windows-different types of windows   | 1 |
| 5TH | 28.11.2022 | Monday    | 4.4.Purpose of use of arches and lintels  | 1 |
|     |            |           | <b>CHAPTERS:5. FLOORS, ROOF AND STAIRS-5P</b>   |   |
|     | 29.11.2022 | Tuesday   | 5.1.Floors: Glossary of terms, type of floor finishes-cast-in-situ, concrete flooring(monolithic, bonded), terrazzo tile flooring, cast in situTerrazzo flooring, timber flooring(concept only) | 1 |
|     |            |           |   |   |
|     | 30.11.2022 | Wednesday | 5.2.Roofs: Glossary of terms, Types of roofs, concept and function of flat, pitched, hipped and sloped roofs  | 1 |
| 1ST | 1.12.2022  | Thursday  | 5.3. Stairs: Glossary of terms; staircase, winder, Landing, stringer, newel, baluster, rise,tread, width of stair case, hand rail, nosing, head room, mumty room.                               | 1 |
|     | 2.12.2022  | Friday    | 5.4.Type of stair case- straight flight, dog legged, open well, quarter turn  | 1 |
|     | 5.12.2022  | Monday    | 5.5. Half turn( newel and geometrical stairs), bifurcated stair, spiral stair, cantilever stair, tread, riser stair.  | 1 |
|     |            |           | <b>CHAPTER-6-Protective, Decorative Finishes, Damp and Termite proofing-5P</b>  |   |

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| 2nd | 6.12.2022  | Tuesday   | 6.1.Plastering- purpose- Types of plastering, Types of plaster finishes- Grit finish, rough cast, smooth cast, sand faced, pebble dash, acoustic plastering and plain plaster etc.                  | 1 |
|     | 7.12.2022  | Wednesday | 6.2.Proportion of mortars used for different plasters, preperation of mortars, techniques of plastering and curing  | 1 |
|     | 8.12.2022  | Thursday  | 6.3. Pointing- purpose- Types of pointing, Painting-objective- methods of painting new and old wall surfaces, wood surface and metal surfaces- powder coating and spray painting on metal surfaces. | 1 |
|     | 9.12.2022  | Friday    | 6.4.White wshing- Colour washing- Distempering-internal and external walls  | 1 |
| 3rd | 12.12.2022 | Monday    | 6.5. Damp and Termite proofing- Materials and Methods.  | 1 |
|     |            |           | <b>CHAPTER-7-Green Buildings, Energy Management and Energy Audit of Buildings and project- 4P</b>   |   |
|     | 13.12.2022 | Tuesday   | 8.1. Concept of green building, Introduction to Energy Management and Energy Audit of Buildings   | 1 |
|     | 14.12.2022 | Wednesday | 8.2. Aims of energy management of buildings.  | 1 |
|     | 15.12.2022 | Thursday  | 8.3.Types of energy audit, Response energy audit questionnaire  | 1 |
|     | 16.12.2022 | Friday    | 8.4. Energy surveying and audit report  | 1 |
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