

| <b>LESSON PLAN</b>   |                 |                                  |  |   |                          |
|--|-----------------|----------------------------------|--|---|--------------------------|
| <b>Academic Session :- 2023-2024</b>   |                 |                                  |  |   |                          |
| Subject: Building Material and Construction Technology(Th.3)   |                 |                                  | Semester from Date:01/08/2023to 30/11/2023 |   |                          |
| Semester: 3rd  | No. of weeks:14 | Teaching faculty: Swagatika Dani |  |   | 5P/week                  |
| No. of Days/week class allotted:05 Period per week( Monday, Tuesday, Wednesday, Thursday, Friday: 1p.each) |                 |                                  |  |   | Total period: 75         |
| MONTH  | Week            | DATE                             | DAYS/PERIOD                                | Syllabus to be covered  | NO. OF PERIODS AVAILABLE |
|  |                 |                                  |  | <b>PART:A( BUILDING MATERIALS)</b>  |                          |
| <b>AUGUST</b>  |                 |                                  |  | <b>CHAPTER-STONE-5P</b>   | 5                        |
|  | <b>1st</b>      | 01.08.2023                       | Tues                                       | 1.1 Classification of rock, uses of stones, natural bed of stones                               | 1                        |
|  |                 | 02.08.2023                       | Wed  | 1.2 Quality of good building stones   | 1                        |
|  |                 | 03.08.2023                       | Thur                                       | 1.3 Dressing of stones  | 1                        |
|  |                 | 04.08.2023                       | Fri  | 1.4 Characteristics of different types of stones  | 1                        |
|  |                 | 07.08.2023                       | Mon  | 1.5 Uses of different type of stones  | 1                        |
|  |                 |                                  |  | <b>CHAPTER-2-BRICKS-6P</b>  |                          |
|  | <b>2nd</b>      | 08.08.2023                       | Tues                                       | 2.1. Brick earth- Its composition   | 1                        |
|  |                 | 09.08.2023                       | Wed  | 2.2.Brick making- preparation of brick earth  | 1                        |
|  |                 | 10.08.2023                       | Thu  | 2.3.Moulding, Drying  | 1                        |
|  |                 | 11.08.2023                       | Fri  | 2.4.Burning in kilns(continuous process)  | 1                        |
|  |                 | 14.08.2023                       | Mon  | 2.5.Classification of bricks  |                          |
|  |                 | 16.08.2023                       | Wed  | 2.6 Quality of good building bricks   | 1                        |
|  |                 |                                  |  | <b>CHAPTER-3- CEMENT MORTAR AND CONCRETE-7P</b>   | 7                        |
|  | <b>3rd</b>      | 17.08.2023                       | Thu  | 3.1. Cement: Type of cement, Properties, manufacturing of cement                                | 1                        |
|  |                 | 18.08.2023                       | Fri  | 3.2.Importance and application of blended cement with fly ash and blast furnace slag            | 1                        |
|  |                 | 21.08.2023                       | Mon  | 3.3.Mortar: Defination and type of mortar   | 1                        |
|  |                 | 22.08.2023                       | Tues                                       | 3.4.Source and classification of sand, bulking of sand  | 1                        |
|  |                 | 23.08.2023                       | Wed  | 3.5.Use of gravel, morrum and fly ash as different building material                            | 1                        |
|  |                 | 24.08.2023                       | Thu  | 3.6. Concrete: Defination and composition, Water cement ratio-Workability,mechanical properties | 1                        |
|  | <b>4th</b>      | 25.08.2023                       | Fri  | 3.7.grading of aggregates, mixing and placing, curing of concrete                               | 1                        |
|  |                 |                                  |  | <b>CHAPTER-4-OTHER CONSTRUCTION MATERIAL-7P</b>   | 7                        |
|  |                 | 28.08.2023                       | Mon  | 4.1.Timber: Classification and Structure  | 1                        |

|     |            |       |  |   |
|-----|------------|-------|--|---|
| 5th | 29.08.2023 | Tues  | 4.2.Seasoning of timber- Importance  | 1 |
|     | 31.08.2023 | Thu   | 4.3.Characteristics of good timber.  | 1 |
| 1st | 01.09.2023 | Fri   | 4.4.Clay products and refractory materials-<br>Definition and Classification   | 1 |
| 2nd | 04.09.2023 | Mon   | 4.5.Property and uses of refractory material- tiles , terracotta   | 1 |
|     | 05.09.2023 | Tues  | 4.6. Porcelain glazing; Iron and steel. Uses of cast iron, wrought iron, mild steel and tor steel  | 1 |
|     | 07.09.2023 | Thurs | Class test   | 1 |
|     |            |       | <b>CHAPTER-5-SURFACE PROTECTIVE MATERIAL-5P</b>  | 5 |
|     | 08.09.2023 | Fri   | 5.1.Composition of paint, enamels  | 1 |
| 3rd | 11.09.2023 | Mon   | 5.2.Composition of varnishes   | 1 |
|     | 12.09.2023 | Tues  | 5.3. Type and uses of surface protective material like paints, Enamels   | 1 |
|     | 13.09.2023 | Wed   | 5.4.Varnishes, Distempers  | 1 |
|     | 14.09.2023 | Thurs | 5.5.Emulsion, french polish and Wax Polish   | 1 |
|     |            |       | <b>PART:B(CONSTRUCTION TECHNOLOGY)</b>   |   |
|     |            |       | <b>CHAPTER-1-INTRODUCTION-2P</b>   | 2 |
|     | 15.09.2023 | Fri   | 1.1.Building and classification of buildings based on occupancy  | 1 |
| 4th | 18.09.2023 | Mon   | 1.2.Different components of a building, site investigation- objectives, site reconnaissance and exploration  | 1 |
|     |            |       | <b>CHAPTER-2- FOUNDATION-4P</b>  | 4 |
|     | 21.09.2023 | Thur  | 2.1.Concept of foundation and its purpose  | 1 |
|     | 22.09.2023 | Fri   | 2.2. Types of foundations- shallow and deep  | 1 |
|     |            |       |  |   |
|     | 25.09.2023 | Mon   | 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 |
|     |            |       |  |   |
|     | 26.09.2023 | Tues  | 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>   |   |
|     |            |       |  |   |
|     | 27.09.2023 | Wed   | 3.1.Purpose of walls, classification of walls-load bearing, non-load bearing walls, retaining walls.   | 1 |

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| SEPTEMBER  | 5th        | 28.09.2023 | Thur  | 3.2. Classification of walls as per material of construction:  | 1 |
|            |            | 03.10.2023 | Tues  | 3.3.Partition walls: Suitability and uses of brick and   | 1 |
| OCTOBER    | 1st        |            |   | 3.4.Brick masonry: Definition of different terms, Bond-meaning   |   |
|            |            | 04.10.2023 | Wed   |  | 1 |
|            |            | 05.10.2023 | Thur  | 3.5.Stone masonry  | 1 |
|            |            |            |   | 3.6.Glossary of terms- string course, corbel, cornice, block-in-co   |   |
|            |            | 06.10.2023 | Fri   |  | 1 |
|            | 2nd        |            |   | <b>CHAPTER-4-DOORS, WINDOWS AND LINTELS-4P</b>   | 4 |
|            |            | 09.10.2023 | Mon   | 4.1.Glossary of terms used in doors and windows  | 1 |
|            |            | 10.10.2023 | Tues  | 4.2.Doors-different types of doors   | 1 |
|            |            | 11.10.2023 | Wed   | 4.3. Windows-different types of windows  | 1 |
|            |            | 12.10.2023 | Thurs   | 4.4.Purpose of use of arches and lintels   | 1 |
|            |            |            |   | <b>CHAPTERS:5. FLOORS, ROOF AND STAIRS-5P</b>  | 5 |
|            |            | 13.10.2023 | Fri   | 5.1.Floors: Glossary of terms, type of floor finishes- cast-in-situ, concrete flooring(monolithic, bonded), terrazzo tile flooring, cast in situTerrazzo flooring, | 1 |
|            |            | 16.10.2023 | Mon   | 5.2.Roofs: Glossary of terms, Types of roofs, concept and function of flat, pitched, hipped and sloped roofs   | 1 |
|            |            | 17.10.2023 | Tues  | 5.3. Stairs: Glossary of terms; staircase, winder, Landing, stringer, newel, baluster, rise,tread, width of stair case, hand rail, nosing, head room, mumty        | 1 |
|            |            | 18.10.2023 | Wed   | 5.4.Type of stair case- straight flight, dog legged, open well, quarter turn   | 1 |
|            | 3rd        | 19.10.2023 | Thur  | 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>   | 5 |
|            |            | 20.10.2023 | Fri   | of plaster finishes- Grit finish, rough cast, smooth   | 1 |
| 30.10.2023 |            | Mon        | plasters, prepaation of mortars, techniques of  | 1  |   |
| 31.10.2023 |            | Tues       | objective- methods of painting new and old wall | 1  |   |
| 1st        | 01.11.2023 | Wed        | internal and external walls                     | 1  |   |
|            | 02.11.2023 | Thur       | 6.5. Damp and Termite proofing- Materials and   | 1  |   |

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|-----------------------------|------------|------------|---|--|---|
| <b>NOVEMBER</b><br><b>R</b> |            |            | <b>CHAPTER-7-Green Buildings, Energy Management and Energy Audit of Buildings and project- 4P</b> | 4  |   |
|                             | 03.11.2023 | Fri        | 8.1. Concept of green building, Introduction to Energy Management and Energy Audit of Buildings   | 1  |   |
|                             | 2nd        | 06.11.2023 | Mon   | 8.2. Aims of energy management of buildings.                   | 1 |
|                             |            | 07.11.2023 | Tues  | 8.3.Types of energy audit, Response energy audit questionnaire | 1 |
|                             |            | 08.11.2023 | Wed   | 8.4. Energy surveying and audit report                         | 1 |
|                             |            | 09.11.2023 | Thur  | REVISION CLASS   | 1 |
|                             |            | 10.11.2023 | Fri   | REVISION CLASS   | 1 |
|                             | 3rd        | 13.11.2023 | Mon   | REVISION CLASS   | 1 |
|                             |            | 14.11.2023 | Tues  | REVISION CLASS   | 1 |
|                             |            | 15.11.2023 | Wed   | REVISION CLASS   | 1 |
|                             |            | 16.11.2023 | Thurs   | REVISION CLASS   | 1 |
|                             |            | 17.11.2023 | Fri   | REVISION CLASS   | 1 |
|                             | 4th        | 20.11.2023 | Mon   | REVISION CLASS   | 1 |
|                             |            | 21.11.2023 | Tues  | REVISION CLASS   | 1 |
|                             |            | 22.11.2023 | Wed   | REVISION CLASS   | 1 |
|                             |            | 23.11.2023 | Thur  | REVISION CLASS   | 1 |
|                             |            | 24.11.2023 | Fri   | REVISION CLASS   | 1 |
|                             | 5th        | 28.11.2023 | Tues  | REVISION CLASS   | 1 |
|                             |            | 29.11.2023 | Wed   | REVISION CLASS   | 1 |
|                             |            | 30.11.2023 | Thur  | REVISION CLASS   | 1 |