

BHUBANANANDA ODISHA SCHOOL OF ENGINEERING, CUTTACK
DEPARTMENT OF CIVIL ENGINEERING
LESSON PLAN

SUBJECT NAME-BUILDING MATERIALS AND CONSTRUCTION TECHNOLOGY (TH-3)

TOTAL NO. OF WEEK-17

SEMESTER-3RH

TOTAL PERIODS-75

CLASSES ALLOTTED PER WEEK-5

NAME OF TEACHING FACULTY – **JAYALALITA LENKA**

WINTER SESSION-(2020-2021)

| Week & Date | No of Periods Available | Topics to be covered | Topics actually covered | If any Short fall | Reason of short fall | How to make up | Remarks/ Signature with date |
|---|-------------------------|--|-------------------------|-------------------|----------------------|----------------|------------------------------|
| 1 st 01-09-2020 To 05-09-2020 | 03 | 1.1 Classification of rock, uses of stone, natural bed of stone, 1.2 Qualities of good building stone, 1.3 Dressing of stone | | | | | |
| 2 nd 07-09-2020 To 12-09-2020 | 04 | 1.4 Characteristics of different types of stone and their uses 2.1 Brick earth – its composition 2.2 Brick making – Preparation of brick earth, Moulding, Drying, Burning in kilns (continuous Process) | | | | | |
| 3 rd 14-09-2020 to 19-09-2020 | 04 | 2.3 Classification of bricks, size of traditional and modular bricks, qualities of good building bricks 3.1 Cement: Types of cements, Properties of cements, Manufacturing of cement | | | | | |
| 4 th 21-09-2020 to 26-09-2020 | 04 | 3.2 Importance and application of blended cement with fly ash and blast furnace slag. 3.3 Mortar: Definition and types of mortar 3.4 Sources and classification of sand, Bulking of sand 3.5 Use of gravel, morrum and fly ash as different building material | | | | | |

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| 5th 28-09-2020 to 03-10- 2020 | 04 | 3.6 Concrete: Definition and composition- Water cement ratio- Workability, mechanical properties and grading of aggregates, mixing, placing, compacting and curing of concrete. 4.1 Timber: Classification and Structure of timber. 4.2 Seasoning of timber – Importance. 4.3 Characteristics of good timber. | | | | | |
| 6 th 05-10-2020 to 10-10- 2020 | 05 | 4.3 Clay products and refractory materials – Definition and Classification. 4.4 Properties and uses of refractory materials- tiles, terracotta, porcelain glazing. | | | | | |
| 7th 12-10-2020 to 17-10- 2020 | 05 | 4.5 Iron and Steel: Uses of cast iron, wrought iron, mild steel and tor steel 5.1 Composition of Paints, enamels, varnishes. 5.2 Types and uses of surface protective materials like Paints, Enamels, Varnishes, Distempers, Emulsion, French polish and Wax Polish. | | | | | |
| 8 th 19-10-2020 to 22-10- 2020 | 03 | 1.1 Buildings and classification of buildings based on occupancy 1.2 Different components of a building. 1.3 Site investigation – objectives, site reconnaissance and explorations. 2.1 Concept of foundation and its purpose 2.2 Types of foundations – shallow and deep | | | | | |
| 9 th 02-11-2020 to 07-11- 2020 | 05 | 2.3 Shallow foundation-constructional details of : Spread foundations for walls, thumb rules for depth and width of foundation and thickness of concrete block 2.4 Deep foundations: Pile foundations-their suitability, classification of piles based on materials, function and method of installation. 3.1 Purpose of walls 3.2 Classification of walls – load bearing, non-load bearing walls, retaining walls. | | | | | |

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| | | 3.3 Classification of walls as per materials of construction: brick, stone, reinforced brick, reinforced concrete, precast, hollow and solid concrete block and composite masonry walls (Concept Only). | | | | | |
| 10 th 09-11-2020 to 14-11-2020 | 05 | 3.4 Partition Walls : Suitability and uses of brick and wooden partition walls 3.5 Brick masonry : Definition of different terms 3.6 Bond – meaning and necessity: English bond for 1 and 1-1/2 Brick thick walls. T, X and right angled corner junctions. Thickness for 1 and 1-1/2 brick square pillars in English bond 3.7 Stone Masonry : 3.8 Glossary of terms –String course, corbel, cornice, block-in-course, grouting, mouldings, templates, throating, through stones, parapet, coping, pilaster and buttress 4.1 Glossary of terms used in doors and windows 4.2 Doors – different types of doors 4.3 Windows – different types of windows | | | | | |
| 11 th 16-11-2020 to 21-11-2020 | 04 | 4.4 Purpose of use of arches and lintels 5.1 Floors: Glossary of terms ,Types of floor finishes – cast-in-situ, concrete flooring(monolithic, bonded), terrazzo tile flooring, cast in situ Terrazzo flooring, timber flooring (Concept only) 5.2 Roofs: Glossary of terms, Types of roofs, concept and function of flat, pitched, hipped and Sloped roofs | | | | | |
| 12 th 23-11-2020 to 28-11-2020 | 05 | 5.3 Stairs: Glossary of terms; Stair case, winder, landing, stringer, newel, baluster, rise, tread, width of stair case, hand rail, nosing, head room, mumty room. 5.4 Various types of stair case – straight flight, dog legged, open well, quarter turn, half turn | | | | | |

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| | | (newel and geometrical stairs), bifurcated stair, spiral stair, cantilever stair, tread riser stair. 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. | | | | | |
| 13 th 30-11-2020 to 05-12- 2020 | 04 | 6.2 Proportion of mortars used for different plasters, preparation of mortars, techniques of plastering and curing 6.3 Pointing – purpose –Types of pointing 6.4 Painting – objectives – method of painting new and old wall surfaces, wood surface and metal surfaces – powder coating and spray painting on metal surfaces. | | | | | |
| 14 th 07-12-2020 to 12-12- 2020 | 05 | 6.5 White washing – Colour washing – Distemping – internal and external walls. 6.6 Damp and Termite proofing – Materials and Methods. 8.1 Concept of green building 8.2 Introduction to Energy Management and Energy Audit of Buildings. | | | | | |
| 15 th 21-12-2020 to 26-12- 2020 | 04 | 8.3 Aims of energy management of buildings. 8.4 Types of energy audit, Response energy audit questionnaire 8.5 Energy surveying and audit report. | | | | | |
| 28-12-2020 to 31-12- 2020 | 03 | Revision of syllabus and Discussion, MCQ Test Previous year Question discussion | | | | | |