NILASAILAINSTITUTEOFSCIENCE&TECHNOLOGY
SERGARH-756060, BALASORE (ODISHA)
(ApprovedbyAICTE&affiliatedtoSCTE&VT,Odisha)

LESSONPLAN

SUBJECT:Th-3(BUILDINGMATERIALSANDCONSTRUCTIONTECHNOLOGY)

CHAPTERWISEDISTRIBUTIONOFPERIODS

Sl.No.	NameofthechapteraspertheSyllabus	No.of Periods	No.of periods
	PART:A(BUILDINGMATERIALS)		
1	Stone	6	6
2	Bricks	6	6
3	Cement,MortarandConcrete	7	7
4	OtherConstructionMaterials	7	7
5	SurfaceProtectiveMaterials	5	5
	PART:B(CONSTRUCTIONSTECHNOLOGY		
1	Introduction	2	2
2	Foundations	4	4
3	Walls&MasonryWorks	6	6
4	Doors,WindowsAndLintels	4	4
5	Floors,RoofsandStairs	5	5
6	Protective, Decorative Finishes, Damp and Termite Proofing	5	5
7	Green Buildings, Energy Management and Energy Audit of Buildings & Project	4	4
	TOTAL	61	61

Discipline: CIVILENGG.	**Semester:** 3rd	**NameoftheTeachingFaculty:ER.DIPTIMAYEEMOHANTY**
Week	**ClassDay**	**Theory/PracticalTopics**
1st	**1st**	BUILDINGMATERIALS: 1.1Classificationofrock,usesofstone,naturalbedofstone
	2nd	1.2Qualitiesofgoodbuilding stone,
	3rd	1.3Dressingofstone
	4th	1.4Characteristicsofdifferenttypesofstoneandtheiruses
2nd	**1st**	2.1Brickearth–itscomposition
	2nd	2.2Brickmaking–Preparationofbrickearth,Moulding,Drying,Burninginkilns (continuous Process)
	3rd	2.3 Classificationofbricks,sizeoftraditionalandmodularbricks,qualitiesofgood building bricks
	4th	3.1Cement: Typesofcements,Propertiesofcements,Manufacturingofcement
3rd	**1st**	3.2Importanceandapplicationofblendedcementwithflyashandblastfurnace slag.
	2nd	3.3Mortar:Definitionandtypesofmortar
	3rd	3.4Sourcesandclassificationofsand,Bulkingofsand
	4th	3.5Useofgravel,morrumandflyashasdifferentbuildingmaterial
th	**1st**	3.6 Concrete: Definitionandcomposition-Watercementratio-Workability,mechanical properties and grading of aggregates, mixing, placing, compacting and curing of concrete.

4	**2nd**	4.1Timber:ClassificationandStructureof timber.
4th	**3rd**	4.2Seasoningoftimber–Importance.
	4th	4.3Characteristicsofgood timber
5th	**1st**	4.4Purposeofuseofarchesand lintels
	2nd	4.5IronandSteel:Usesofcastiron,wroughtiron,mildsteelandtorsteel
	3rd	SurfaceProtective Materials 5.1 CompositionofPaints,enamels, varnishes.
	4th	5.2 Typesandusesofsurface protectivematerialslikePaints,Enamels,Varnishes, Distempers, Emulsion, French polish and Wax Polish.
6th	**1st**	CONSTRUCTIONTECHNOLOGY: Introduction 1.1Buildingsandclassificationofbuildingsbasedonoccupancy
	2nd	1.2Differentcomponentsofabuilding
	3rd	1.3Siteinvestigation–objectives,sitereconnaissanceandexplorations
	4th	Foundations 2.1Conceptoffoundationanditspurpose
7th	**1st**	2.2Typesoffoundations–shallowanddeep
	2nd	2.3Shallowfoundation-constructionaldetailsof:Spreadfoundationsforwalls,thumb rules for depth and width of foundation and thickness of concrete block
	3rd	2.4 Deepfoundations: Pilefoundations-theirsuitability,classificationofpilesbasedon materials, function and method of installation.
	4th	Walls&MasonryWorks: 3.1Purpose ofwalls

8th	**1st**	3.2Classificationofwalls–loadbearing,non-loadbearingwalls,retainingwalls
8th	**2nd**	3.3 Classification of walls as per materials of construction: brick, stone, reinforced brick,reinforcedconcrete,precast,hollowandsolidconcreteblockandcomposite masonrywalls(Concept Only.
	3rd	3.4PartitionWalls:Suitabilityandusesofbrickandwoodenpartitionwalls
	4th	3.5Brickmasonry:Definitionofdifferentterms
9th	**1st**	3.6 Bond–meaningandnecessity: Englishbondfor1and1-1/2 Brickthickwalls.T,X and right angled corner junctions. Thickness for 1and 1-1/2 brick square pillars in Englishbond
	2nd	3.7StoneMasonry:
	3rd	3.8 Glossary of terms –String course, corbel, cornice, block-in-course, grouting, mouldings,templates,throating,throughstones,parapet,coping,pilasterandbuttress
	4th	Doors,WindowsAnd Lintels 4.1Glossary oftermsusedindoorsandwindows
10th	**1st**	4.2Doors–differenttypesofdoors
	2nd	4.3Windows–differenttypesofwindows
	3rd	4.4Purposeofuseofarchesand lintels
	4th	Floors,Roofsand Stairs 5.1 Floors: Glossary of terms ,Types of floor finishes – cast-in-situ, concrete flooring(monolithic,bonded),terrazzo tileflooring,castinsituTerrazzo flooring,timber
11th	**1st**	5.2 Roofs: Glossary ofterms,Typesofroofs,conceptandfunctionofflat,pitched, hipped and Sloped roofs
	2nd	5.3 Stairs:Glossary ofterms; Staircase,winder,landing,stringer,newel,baluster,rise, tread, width of stair case, hand rail, nosing, head room, mumty room
	3rd	5.4Varioustypesofstaircase–straightflight,doglegged,openwell,quarterturn,half turn(newelandgeometricalstairs),bifurcatedstair,spiralstair,cantileverstair,tread riser stair.

	4th	Protective,DecorativeFinishes,DampandTermiteProofing 6.1 Plastering – purpose – Types of plastering, Types of plaster finishes – Grit finish, roughcast,smoothcast,sandfaced,pebbledash,acousticplasteringandplainplaster
12th	**1st**	6.2 Proportionofmortarsusedfordifferentplasters,preparationofmortars, techniques of plastering and curing
	2nd	6.3Pointing–purpose–Typesofpointing
	3rd	6.3Pointing–purpose–Typesofpointing
	4th	6.3Pointing–purpose–Typesofpointing
13th	**1st**	6.4 Painting–objectives–methodofpaintingnewandoldwallsurfaces,woodsurface and metal surfaces – powder coating and spray painting on metal surfaces
	2nd	6.5Whitewashing–Colourwashing–Distempering–internalandexternal walls
	3rd	6.6DampandTermiteproofing–Materialsand Methods.
	4th	GreenBuildings,EnergyManagementandEnergyAuditOfBuildings&Project 7.1Conceptofgreenbuilding
14th	**1st**	7.2IntroductiontoEnergyManagementandEnergyAuditof Buildings.
	2nd	7.3Aimsofenergy managementofbuildings
	3rd	7.3Aimsofenergy managementofbuildings
	4th	7.3Aimsofenergy managementofbuildings
15th	**1st**	8.4Typesofenergyaudit,Responseenergyauditquestionnaire
	2nd	8.4Typesofenergyaudit,Responseenergyauditquestionnaire

	3rd	8.5Energysurveyingandauditreport.