

# DEPARTMENT OF CIVIL ENGINEERING, OSME KEONJHAR

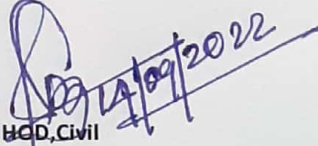
## LESSON PLAN FOR WINTER-2022


Discipline: <u>Civil</u>		Semester: <u>3rd</u>	Name of the faculty: <u>Er.Sashidhar Behera</u>
Subject: <u>Building Materials &amp; Construction Technology</u>		No of days/per week class allotted: <u>5 h</u>	Semester from date: <u>15.09.2022 to 22.12.2022</u> No. of Weeks : <u>14</u>
WEEK	DATE/CLASS DAY	PERIODS AVAILABLE	TOPIC TO BE COVER
<b>PART A : BUILDING MATERIALS-</b>			
1st week	15.09.2022	2	<b>Briefing about syllabus and Introduction about subject,its objective ,marks distribution,books name to be refer etc.</b> <b>Chapter-1-Stone-</b> 1.1- Classification of rock, uses of stone, natural bed of stone.
2nd week	20.09.2022	1	1.2- Qualities of good building stone.
	21.09.2022	2	1.3- Dressing of stone. 1.4- Characteristics of different types of stone and their uses. <b>Discussing of possible QUESTIONS-</b>
	22.09.2022	2	<b>Chapter-2-Bricks-</b> 2.1- Brick earth – its composition 2.2- Brick making- preparation of brick earth,moulding, drying, burning in kilns( Continuous process )
3rd week	27.09.2022	1	2.3- Classification of bricks, size of traditional and modular bricks, qualities of good building bricks. <b>Discussing of possible QUESTIONS-</b>
	28.09.2022	2	<b>Chapter-3-Cement, Mortar and Concrete-</b> 3.1- Cement-Types of cement,properties of cement,manufacturing process of cement.
	29.09.2022	2	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- Uses of gravel,morrum and fly ash as different building material
4th week	11.10.2022	1	3.6- Concrete- defination and composition,water cement ratio,workability,mechanical propertiesand grading of aggrgates,mixing,placing,compacting <b>Discussing of possible QUESTIONS-</b>
	12.10.2022	2	<b>Chapter-4-Other construction materials-</b> 4.1- Timber-Classification of and structure of timber. 4.2- Seasoning of timber-Importance.
	13.10.2022	2	4.3- Characteristics of good timber. 4.4- Clay products and refractory materials-definition and classification.
5th week	18.10.2022	1	4.5- Properties and uses of refractory materials-tiles,terracotta, porcelain, glazing.
	19.10.2022	2	4.6- Iron and steel- uses of cast iron,wrought iron,mild steel and tor steel. <b>Discussing of possible QUESTIONS-</b>
	20.10.2022	2	<b>Chapter-5- Surface protective materils-</b> 5.1- Composition of paints,enamels,varnishes. 5.2- Types and uses of surface protective materils - paints, enamels
6th week	25.10.2022	1	Varnishes,Distempers,Emulsion.French polish and wax polish
	26.10.2022	2	<b>Fully Revision from 1st chapter to 5th chapter and qustion &amp; answer discussion for IA , Monthly Test,also in Semester pattern.</b>
	27.10.2022		<b>Monthly Class Test of October</b>



7th week	01.11.2022	1	<b>Chapter-1- Introduction-</b> 1.1-Building and classification of building based on occupancy. 1.2- Different component of building 1.3- Site investigation-objective,site reconnaissance and explorations. <b>Discussing of possible QUESTIONS-</b>
	02.11.2022	2	<b>Chapter-2-Foundation-</b> 2.1- Concept of foundation and its purpose. 2.2- Types of foundation-shallow and deep 2.3- Shallow foundation-construction details of spread foundation for walls,thumb rules for depth and width of foundation and thickness of concrete block. 2.4- Deep foundation-Pile foundation-their suitability,classification of piles based on materials,function and method of installation. <b>Discussing of possible QUESTIONS-</b>
	03.11.2022	2	<b>Chapter-3-Walls &amp; Masonry Works-</b> 3.1- Purpose of walls. 3.2- Classifications of walls-load bearing,non-load bearing,retaining wall 3.3- classification of walls as per materials-brick,stone,reinforced brick,rcc,precast,hollow and solid concrete block,composite walls. 3.4- Partition walls-suitability and uses of brick and wooden partition walls.
8th week	09.11.2022	2	3.5- Brick masonry-definition of different terms. 3.6- Bond- meaning and necessity,english bond for 1 and 1-1/2 brick wall.T.X and right angled corner junctions.1-1/2 brick square pillars english bond.
	10.11.2022	2	3.7- Stone masonry- Definitions. 3.8- Glossary of terms-string course,corbal,cornice,block in course,grouting, moulding,templates,throating,through stones,parapet,coping,pilaster and buttress. <b>Discussing of possible QUESTIONS-</b>
9th week	15.11.2022	1	<b>Chapter-4- Doors, windows and lintels-</b> 4.1- Glossary term used in doors and swindows 4.2- Different types of doors
	16.11.2022	1 hour/each theory	INTERNAL ASSESSMENT-TH-01,TH-02,TH-03
	17.11.2022	1 hour/each theory	INTERNAL ASSESSMENT-TH-04,TH-05.
10th week	22.11.2022	1	4.3- Windows- different types of windows
	24.11.2022	2	4.4- Purpose of use of arches and lintels. <b>Discussing of possible QUESTIONS-</b>
11th week	28.11.2022		Monthly Class Test of November
	29.11.2022	1	<b>Chapter-5-Floors,roofs and stairs-</b> 5.1- Floors-Glossary of terms,types of floor finishes-cast in situ,concrete flooring,terrazzo tile flooring,cast in situ terrazzo flooring,timber flooring.
	01.12.2022	2	5.2- Roofs-glossary of terms,types of roof,concept and function of flat, pitched, hipped, and sloped roof. 5.3- Stairs-glossary of terms,stair case,winder,landing,stringer,baluster, newel,rise,tread,width of stair case,hand rail,nosing,head room,mumty room.
12th week	06.12.2022	1	5.4- Various types of stair case- straight flight,dog legged,open well,quarter turn,half turn,bifurcated stair,spiral stair,cantilever stair,tread rise stair. <b>Discussing of possible QUESTIONS-</b>
	07.12.2022	2	<b>Chapter-6- Protective,decorative,damp and termite proofing-</b> 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 plastering etc. 6.2- Proportion of mortars used for differnt plasters,preparation of mortars, techniques of plastering and curing. 6.3- Pointing-purpose-types of pointing.

	08.12.2022	2	6.4- Painting - objective-method of painting new and old surface,wood surface and metal surface-powder coating and spray painting on metal surfaces. 6.5- White washing-colour washing-distemping-external and internal walls.
13th week	13.12.2022	1	6.6- Damp and termite proofing- materials and method. <b>Discussing of possible QUESTIONS-</b>
	14.12.2022	2	<b>Chapter-7-Green building,energy management,energy audit &amp; project-</b> 7.1- Concept of green building. 7.2- Introduction of energy management & energy audit of building.
	15.12.2022	2	7.3- Aims of energy management of building. 7.4- Types of energy audit,response energy audit questionnaire.
14th week	20.12.2022	1	7.5- Energy surveying and audit report. <b>Discussing of possible QUESTIONS-</b>
	21.12.2022	2	<b>Fully Revision from Part-B-1st chapter to 8th chapter and question &amp; answer discussion for mock test ,also in Semester pattern.</b>
	22.12.2022	2	<b>FULL REVISION</b>

  
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