

LESSON PLAN-(WINTER-21)

**SUBJECT-BUILDING MATERIALS & CONSTRUCTION TECHNOLOGY-TH-03,
SEMESTER-5TH SEM CIVIL FACULTY- ER. SASHIDHAR BEHERA (HOD)**

WEEK	TOPIC TO BE COVER
PART A : BUILDING MATERIALS-	
1st week	<p>Briefing about syllabus and Introduction about subject,its objective ,marks distribution,books name to be refer etc.</p> <p><u>Chapter-1-Stone-</u></p> <p>1.1- Classification of rock, uses of stone, natural bed of stone.</p>
2nd week	<p>1.2- Qualities of good building stone.</p> <p>1.3- Dressing of stone.</p> <p>1.4- Characteristics of different types of stone and their uses.</p> <p>Discussing of possible QUESTIONS-</p> <p><u>Chapter-2-Bricks-</u></p> <p>2.1- Brick earth – its composition</p> <p>2.2- Brick making- preparation of brick earth,moulding, drying, burning in kilns(Continuous process)</p>
3rd week	<p>2.3- Classification of bricks, size of traditional and modular bricks, qualities of good building bricks.</p> <p>Discussing of possible QUESTIONS-</p> <p><u>Chapter-3-Cement, Mortar and Concrete-</u></p> <p>3.1- Cement-Types of cement,properties of cement,manufacturing process of cement.</p> <p>3.2- Importance and application of blended cement with fly ash and blast furnace slag.</p> <p>3.3- Mortar-definition and types of mortar.</p> <p>3.4- Sources and classification of sand,bulking of sand.</p> <p>3.5- Uses of gravel,morrum and fly ash as different building material</p>
4th week	<p>3.6- Concrete- definition and composition,water cement ratio,workability,mechanical properties and grading of aggregates,mixing,placing,compacting, Discussing of possible QUESTIONS-</p> <p><u>Chapter-4-Other construction materials-</u></p> <p>4.1- Timber-Classification of and structure of timber.</p> <p>4.2- Seasoning of timber-Importance.</p> <p>4.3- Characteristics of good timber.</p> <p>4.4- Clay products and refractory materials-definition and classification.</p>
5th week	<p>4.5- Properties and uses of refractory materials-tiles,terracotta, porcelain, glazing.</p> <p>4.6- Iron and steel- uses of cast iron,wrought iron,mild steel and tor steel.</p> <p>Discussing of possible QUESTIONS-</p> <p><u>Chapter-5- Surface protective materials-</u></p> <p>5.1- Composition of paints,enamels,varnishes.</p> <p>5.2- Types and uses of surface protective materials - paints, enamels</p>
6th week	<p>Varnishes,Distempers,Emulsion French polish and wax polish</p> <p>Fully Revision from 1st chapter to 5th chapter and question & answer discussion for IA , Monthly Test,also in Semester pattern.</p> <p style="text-align: center;">Monthly Class Test of October</p>

7th week	Chapter-1- Introduction- 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. Discussing of possible QUESTIONS-
	Chapter-2-Foundation- 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. Discussing of possible QUESTIONS-
	Chapter-3-Walls & Masonry Works- 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	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.
	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. Discussing of possible QUESTIONS-
9th week	Chapter-4- Doors, windows and lintels- 4.1- Glossary term used in doors and windows 4.2- Different types of doors
	INTERNAL ASSESSMENT-TH-01,TH-02,TH-03
	INTERNAL ASSESSMENT-TH-04,TH-05.
10th week	4.3- Windows- different types of windows
	4.4- Purpose of use of arches and lintels. Discussing of possible QUESTIONS-
11th week	Monthly Class Test of November
	Chapter-5-Floors,roofs and stairs- 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.
	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	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. Discussing of possible QUESTIONS-
	Chapter-6- Protective,decorative,damp and termite proofing- 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.

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


 01/10/2021
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