



MAHARAJA POLYTECHNIC, GAMEI, BHUBANESWAR,  
LESSON PLAN

NAME OF FACULTY:-LAXMAN MAJHI  
BRANCH & SEMESTER:-CIVIL ENGG& 6<sup>th</sup> SEM  
TOTAL NO. OF STUDENT IN THE CLASS:-28  
TOTAL NO. OF CLASSES REQUIRED:-60  
SESSION:-2022-23

SUBJECT NAME:- CONCRETE TECHNOLOGY

Sl. No.	Topics to be covered	Topics covered on date	Total no. of students present	Verified by HOD	Verified by the principal	Remarks
1	UNIT:1 CONCRETE AS A CONSTRUCTION MATERIAL Grades of concrete.	10/03/22	19			
2	Advantages and disadvantages of concrete. UNIT:2 CEMENT	11/03/22	18			
3	Composition, hydration of cement,	14/03/22	20			
4	water cement ratio and compressive strength, fineness of cement,	15/03/22	17			
5	setting time, soundness, types of cement. UNIT:3 AGGREGATE	16/03/22	17			
6	Classification and characteristics of aggregate	17/03/22	15			
7	deteriorous substances in aggregates, fineness modulus,	18/03/22	16			
8	grading of aggregate, I.S.383 UNIT:4 WATER	22/03/22	18			
9	Quality of water for mixing and curing. UNIT 5 : ADMIXTURES	25/03/22	20			
10	Important functions, classification of admixtures, I.S 9103, accelerating	28/03/22	19			



11	admixtures, retarding admixtures, water reducing admixtures, air containing admixtures.	4/04/22	17			
<b>UNIT 6 : PROPERTIES OF FRESH CONCRETE:</b>						
12	Concept of fresh concrete, workability	5/04/22	15			
13	slump test, compacting factor test,	6/04/22	16			
14	V-bee consistency test and flow test, requirement of workability, I.S. 1199.	8/04/22	18			
<b>UNIT 7 : PROPERTIES OF HARDENED CONCRETE</b>						
15	Cube and cylinder compressive strengths,	9/04/22	19			
16	flexural strength of concrete, stress-strain and elasticity,	11/04/22	20			
17	phenomena of creep and shrinkage, permeability, durability of concrete,	12/04/22	15			
18	sulphate, chloride and acid attack on concrete, efflorescence.	13/04/22	17			
<b>UNIT 8 : CONCRETE MIX DESIGN</b>						
19	Introduction Data or input required for mix design.	14/04/22	18			
20	Nominal mix concrete & design mix concrete.	19/04/22	15			
21	Basic consideration for concrete mix design, Methods of proportioning concrete mix – I.S Code method of mix design (I.S. 10262)	20/04/22	18			
<b>UNIT 9 : PRODUCTION OF CONCRETE:</b>						
22	Batching of materials, mixing of concrete materials, ,	21/04/22	20			
23	transportation, placing of concrete, compaction of concrete	22/04/22	19			
24	compaction methods, vibrators, curing	21/05/22	16			
25	when to start and time of curing, formwork-requirements and types ,stripping of forms.	31/05/22	14			
<b>UNIT 10 : INSPECTION AND QUALITY CONTROL OF CONCRETE</b>						
26	Quality control of Concrete as per I.S. 456, Factors causing the variations in the quality of concrete	6/05/22	15			



27	, field quality control, Sampling & acceptance criteria as per Clause 15&16 of IS:456.	7/05/22	18				
28	Mixing, Transporting, Placing & curing requirements of Concrete as per I.S.456.	8/05/22	17				
29	Inspection and Testing as per Clause 17 of IS:456.	10/05/22	19				
30	Durability requirements of Concrete as per I.S:456.	10/05/22	20				
	<b>UNIT 11 : SPECIAL CONCRETE</b>						
31	Introduction to ready mix concrete, high performance concrete, silica fume concrete, shot-crete concrete or gunniting	12/05/22	20				
32	<b>UNIT 12 : DETERIORATION OF CONCRETE AND ITS PREVENTION</b>						
33	Types of deterioration, prevention of concrete deterioration,	14/05/22	17				
34	corrosion of reinforcement, effects and prevention.	15/05/22	18				
	<b>UNIT 13 : REPAIR TECHNOLOGY FOR CONCRETE STRUCTURES:</b>						
35	Symptom, cause and prevention and.,	14/05/22	19				
36	remedy of defects during construction, cracking of concrete due to different reasons	17/05/22	16				
37	repair of cracks for different purposes, selection of techniques	18/05/22	17				
38	polymer based repairs, common types of repairs.	19/05/22	18				



SIGN OF FACULTY

*K. Armanan*  
15.06.22

SIGN OF HOD

*Amir B*  
15/06/22

SIGN OF PRINCIPAL

*SKM*  
15/06/22