

LESSON PLAN FOR SUMMER SESSION (2023-24)

PROGRAMME : CIVIL ENGINEERING

COURSE NAME : CONCRETE TECHNOLOGY

COURSE CODE : TH.4 (a)

SEMESTER : 4TH

PERIODS/WEEK: 4

TOTAL PERIODS:60

NAME OF THE FACULTY : MR. YOGESWAR BISOYEE

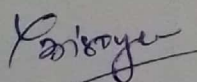
SESSION : 2023-24

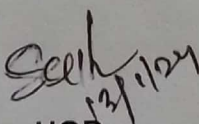
DATE : 16/01/2024 - 26/04/2024

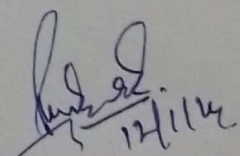
WEEK	PERIODS	UNITS	TOPICS
Jan. 3rd Week	1	1	Concrete as a construction material: Grades of concrete
	2	1	Advantages and disadvantages of concrete.
	3	2	Cement: Composition, hydration of cement, water cement ratio and compressive strength
	4	2	fineness of cement, setting time, soundness, types of cement.
Jan. 4th Week	5	3	Aggregate, Water and Admixtures: Classification and characteristics of aggregate, fineness modulus, grading of aggregate, I.S.383
	6	3	fineness modulus, grading of aggregate, I.S.383
	7	3	Quality of water for mixing and curing
	8	3	Important functions, classification of admixtures, I.S 9103
Feb. 1st Week	9	3	accelerating admixtures, retarding admixtures, water reducing admixtures, air containing admixtures
	10	4	Properties of fresh concrete: Concept of fresh concrete, workability
	11	4	slump test, compacting factor test, V-bee consistency test and flow test
	12	4	requirement of workability, I.S.1199
Feb. 2nd Week	13	5	Properties of hardened concrete: Cube and cylinder compressive strengths
	14	5	flexural strength of concrete
	15	5	stress-strain and elasticity
	16	5	phenomena of creep and shrinkage, permeability
Feb. 3rd Week	17	5	durability of concrete
	18	5	Sulphur and chloride attack

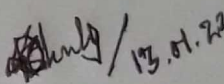
Feb. 4th Week	19	5	acid attack on concrete, efflorescence.
	20	6	Concrete mix Design - Introduction
	21	6	Data or input required for mix design.
	22	6	Nominal Mix concrete
	23	6	design mix concrete
Mar. 1st Week	24	6	Methods of proportioning concrete mix
	25	6	I.S Code method of mix design(I.S.10262)
	26		Revision
	27		Revision
Mar. 2nd Week	28		Monthly Test 1
	29	7	Production of concrete: Batching of materials
	30	7	Mixing of concrete
	31	7	Transportation and placing of concrete
Mar. 3rd Week	32	7	Compaction of concrete (vibrators)
	33	7	Curing of concrete
	34	7	Formwork-requirements and types, stripping of forms. (Concepts only)
	35	8	Inspection and Quality Control of Concrete : Quality control of Concrete as per I.S.456
Mar. 4 th Week	36	8	Factors causing the variations in the quality of concrete
	37	8	Mixing, Transporting, Placing &curing requirements of Concrete as per I.S.456.
	38	8	inspection and Testing as per Clause 17 of IS:456.
	39	8	Durability requirements of Concrete as per I.S:456.
Mar. 5th Week	40	9	Special Concrete : Introduction to ready mix concrete
	41	9	high performance concrete
	42	9	silica fume concrete
	43	9	shot-crete concrete or gunitting (Concepts only).
Apr. 1st Week	44	10	Deterioration of concrete and its prevention: Types of deterioration
	45		INTERNAL ASSESSMENT
	46	10	prevention of concrete deterioration
	47	10	corrosion of reinforcement,
	48	10	effects and prevention

Apr. 2nd Week	49	11	Repair technology for concrete structures: Symptom, cause and prevention
	50	11	remedy of defects during construction
	51	11	cracking of concrete due to different reasons
	52	11	Repair of cracks for different purposes , selection of techniques
Apr. 3rd Week	53	11	polymer based repairs, common types of repairs
	54		Revision
	55		Revision
	56		Revision
Apr. 4th Week	57		Monthly Test 2
	58		Revision
	59		Revision
	60		Revision


Concern faculty


HOD
Civil engineering


Academic Coordinator
GP Nabarangpur


Principal
GP Nabarangpur