

GANDHI ACADEMY OF TECHNOLOGY AND ENGINEERING

DEPARTMENT OF CIVIL ENGINEERING

LESSON PLAN

DISCIPLINE:-CE

SEMESTER:-5TH

FROM DATE:-01.08.2023

TODATE:-31.11.2023

Name of Teaching Faculty: SASMITA KUMARI DAS

SUBJECT:- RAILWAY & BRIDGE ENGINEERING

NO.OFPERIOD/PERWEEKCLASSALLOTTED:-4

TOTALNO.OFCLASSAVAILABLEINSEM:-60

SL NO.	WEEK	CLASSDATE	NO. OF CLASS/DAY	TOPICS
1	Week-01	01.08.2023	1	Railway-Introduction ,Railway terminology
		02.08.2023	1	Advantages of railways ,Classification of Indian Railways
		04.08.2023		HOLIDAY
		05.08.2023	1	Permanent way
2	Week-02	07.08.2023	1	Definition and components of a permanent way
		08.08.2023	1	Concept of gauge, different gauges prevalent in India
		09.08.2023	1	suitability of these gauges under different conditions
		10.08.2023	1	Track materials - Rails
3	Week-03	14.08.2023	1	Functions and requirement of rails, Types of rail sections, length of rails,Rail joints – types, requirement of an ideal joint ,
		15.08.2023		HOLIDAY
		16.08.2023	1	Purpose of welding of rails & its advantages,Creep- definition, cause & prevention
		17.08.2023	1	Sleepers ,Definition function & requirements of sleepers
4	Week-04	18.08.2023	1	Classification of sleepers , Advantages & disadvantages of different types of sleepers
		19.08.2023	1	Ballast ,Functions & requirements of ballast
		20.08.2023		HOLIDAY
		21.08.2023	1	Materials for ballast , Fixtures for Broad gauge
5	Week-05	22.08.2023	1	Connection of rails to rail-fishplate, fish bolts
		23.08.2023	1	Connection of rails to sleepers

25.08.2023

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REVISION

		26.08.2023	1	Geometric for broad gauge
6	Week-06	27.08.2023	1	Typical cross – sections of single & double broad gauge railway track in cutting and embankment
		28.08.2023	1	Permanent & temporary land width
		29.08.2023	1	Gradients for drainage
		31.08.2023	1	Super elevation
7	Week-07	01.09.2023	1	Necessity & limiting valued
		02.09.2023	1	REVISION
		03.09.2023		HOLIDAY
		04.09.2023	1	Points and crossings , Definition
8	Week-08	05.09.2023	1	necessity of Points and crossings
		07.09.2023	1	Types of points & crossings with tie diagrams
		08.09.2023	1	Laying & maintenance of track
		09.09.2023		HOLIDAY
9	Week-09	11.09.2023	1	Methods of Laying & maintenance of track
		12.09.2023	1	Duties of a permanent way inspector
		14.09.2023	1	Introduction to bridges
		15.09.2023	1	Definitions ,Components of a bridge
10	Week-10	16.09.2023	1	Classification of bridges
		17.09.2023		HOLIDAY
		18.09.2023	1	Requirements of an ideal bridge
		19.09.2023		HOLIDAY
11	Week-11	20.09.2023		HOLIDAY
		21.09.2023	1	Bridge site investigation, hydrology & planning
		22.09.2023	1	Selection of bridge site, Alignment
		23.09.2023	1	Determination of Flood Discharge
12	Week-12	25.09.2023	1	Waterway & economic span
		26.09.2023	1	Afflux, clearance & free board

		27.09.2023		HOLIDAY
13	Week-13	30.09.2023	1	Bridge foundation
		31.09.2023	1	Scour depth minimum depth of foundation
		01.10.2023		HOLIDAY
		03.10.2023		HOLIDAY
		04.10.2023	1	Types of bridge foundations
14	Week-14	05.10.2023	1	Spread foundation, pile foundation-
		06.10.2023	1	Well foundation – sinking of wells
		07.10.2023	1	Caission foundation ,Coffer dams
		08.10.2023		HOLIDAY
15	Week-15	09.10.2023	1	Bridge substructure and approaches
		10.10.2023	1	Types of abutments
		11.10.2023	1	Types of piers ,Types of wing walls
		14.10.2023		HOLIDAY
16	Week-16	16.10.2023		HOLIDAY
		17.10.2023	1	Approaches
		18.10.2023	1	Culvert & Cause ways, Types of culvers
		19.10.2023	1	Culvers – brief description
17	Week-17	20.10.2023	1	Types of causeways – brief description

