

LESSON PLAN (RBT)

Name of faculty Sudip Banerjee
 Discipline Civil engineering
 Semester 5th
 Subject RBT
 Work Load:-L- 05 P-nil

Week	Theory	
	Lecture Day	Topic
1st	1st	Introduction to Indian Railways
	2nd	Railway surveys: Factors influencing the railways route,
	3rd	brief description of various types of railway survey
	4th	Classification of permanent way describing its component parts
	5th	Rail Gauge: Definition, types, practice in India
2nd	1st	Rails – types of rails
	2nd	Rail Fastenings: Rail joints, types of rail joints
	3rd	fastenings for rails, fish plates, bearing plates
	4th	SITE VISIT TO LOHARU RAILWAY STATION TRACK TO SEE COMPONENTS OF RAILWAY TRACK
	5th	Functions of sleepers, types of sleepers, requirements of an ideal material for sleepers
3rd	1st	Function of ballast, requirements of an ideal material for ballast
	2nd	Brief description regarding different types of crossings/signallings
4th	1st	REVISION/DISCUSSION
	2nd	do
	3rd	Necessity, maintenance of track, inspection of soil, track and fixture
	4th	maintenance and boxing of ballast maintenance gauges, tools
5th	1st	Earth work an drainage: Features of rail road,
	2nd	bed level, width of formation, side slopes, drains
	3rd	methods of construction, requirement of drainage system
	4th	Introduction Bridge – its function and component parts,
	5th	difference between a bridge and a culvert Classification of Bridges
6th	1st	Their structural elements and suitability
	2nd	REVISION/DISCUSSION
	3rd	Grade Separators-Railway Overbridges (ROB), Railway underbridge (RUB)
	4th	Beam type –RCC, T-Beam, steel girder bridges, plate girder and box girder, balanced cantileve
7th	1st	Arch type – open spandrel and filled spandrel barrel and rib type Suspension type
	2nd	According to the position of highest flood level submersible and According to the position fl
	3rd	IRC classification
	4th	Introduction to open foundation, pile foundation, well foundation
	5th	Piers-definition, parts; types –solid (masonry and RCC), open
8th	1st	Abutments and wing walls – definition, types of abutments
	2nd	Launching of Equipment Bridges
	3rd	Purpose of bearings; types of bearings – fixed plate, rocker and roller
	4th	SITE VISIT TO LOHARU RAILWAY STATION TRACK TO SEE COMPONENTS OF RAILWAY TRACK
9th	1st	Inspection of Steel and Equipment bridges Inspection of Steel and Equipment bridges
	2nd	do
	3rd	Definition and necessity of tunnels
	4th	Typical section of tunnels for a national highway and single and double broad gauge railway t
	5th	REVISION/DISCUSSION
10th	1st	Ventilation –necessity and methods of ventilation,
	2nd	by blowing, exhaust and combination of blowing and exhaust
	3rd	Drainage method of draining water in tunnels
	4th	Lighting of tunnels
	5th	Revision of chapter 1
11th	1st	do
	2nd	chapter 2
	3rd	do
	4th	chapter3
12th	1st	do
	2nd	chapter 4
	3rd	do
	4th	chapter 5
13th	1st	chapter 6
	2nd	do
	3rd	chapter 7
	4th	do
	5th	chapter 8
14th	1st	do
	2nd	Class test (Chapter 1 &2)
	3rd	Class test (Chapter 4& 5)
	4th	Class test (Chapter 6)
	5th	Class test (Chapter 7)
15th	1st	Revision of chapter 8
	2nd	chapter 9
	3rd	chapter 10
	4th	chapter 11
	5th	chapter12