

ACADEMIC SESSION: WINTER-2022

Discipline :CIVIL ENGG	Semester: 5th	Name of the Teaching Faculty : subhasmita behera
Subject:R&BE	No. of Days / Week class allotted: 5	Semester Duration: 15/09/2022 to 22/12/2022 No. of Weeks : 15
Week	Class day	Theory/Practical Topics:
1 st	1 st	Railway terminology Advantages of railways
	2 nd	Classification of Indian Railways
	3 rd	Definition and components of a permanent way
	4 th	Concept of gauge, different gauges prevalent in India,
2 nd	1 st	suitability of these gauges under different conditions
	2 nd	Functions and requirement of rails Types of rail sections, length of rails
	3 rd	Rail joints – types, requirement of an ideal joint
	4 th	Purpose of welding of rails & its advantages
3 rd	1 st	Creep- definition, cause & prevention
	2 nd	Definition, function & requirements of sleepers
	3 rd	Classification of sleepers
	4 th	Advantages & disadvantages of different types of sleepers
4 th	1 st	Durga Puja Holiday
	2 nd	
	3 rd	
	4 th	
5 th	1 st	Functions & requirements of ballast
	2 nd	Materials for ballast Fixtures for Broad gauge
	3 rd	Connection of rails to rail-fishplate, fish bolts Connection of rails to sleepers
	4 th	Typical cross – sections of single & double broad gauge railway track in cutting and embankment
6 th	1 st	continue
	2 nd	Typical cross – sections of single & double broad gauge railway track in cutting and embankment
	3 rd	continue

	4 th	Permanent & temporary land width
7 th	1 st	Gradients for drainage
	2 nd	Super elevation – limiting valued
	3 rd	Super elevation – necessity
	4 th	Definition of Points and crossings
8 th	1 st	necessity of Points and crossings
	2 nd	Types of points & crossings with tie diagrams
	3 rd	Methods of Laying & maintenance of track
	4 th	continue
9 th	1 st	Duties of a permanent way inspector
	2 nd	continue
	3 rd	Definitions of a bridge
	4 th	Components of a bridge
10 th	1 st	Classification of bridges
	2 nd	Requirements of an ideal bridge
	3 rd	Selection of bridge site, Alignment,
	4 th	Determination of Flood Discharge
11 th	1 st	Waterway & economic span
	2 nd	Afflux
	3 rd	clearance & free board
	4 th	Scour depth minimum depth of foundation
12 th	1 st	Types of bridge foundations
	2 nd	spread foundation
	3 rd	pile foundation
	4 th	well foundation
13 th	1 st	sinking of wells
	2 nd	caission foundation
	3 rd	Coffer dams
	4 th	Types of piers
14 th	1 st	Types of abutments
	2 nd	Types of wing walls
	3 rd	Approaches
	4 th	Types of culverts
15 th	1 st	continue
	2 nd	Types of causeways
	3 rd	continue
	4 th	revision