

PNS SCHOOL OF ENGINEERING AND TECHNOLOGY MARSHAGHAI, KENDRAPARA

LESSON PLAN OF 5TH SEMESTER(2022-23) CIVIL ENGINEERING

Discipline :- CIVIL	Semester:-5 TH	Name of the Teaching Faculty GAYATREE SAHOO
Subject: - Railway and bridge engg.	No of Days/per Week Class Allotted: -05	Semester from: - 15TH September, 2022 To: - 24TH December 2022 No of Weeks:- 14
Week	Class Day	Theory
1 st	1 st 15/09/2022	1.0 Introduction: 1.1Railway terminology
	2 nd 16/09/2022	1.2Advantages of railways 1.3Classification of Indian Railways
2 nd	1 st 19/09/2022	2. Permanent way 2.1 Definition
	2 nd 20/09/2022	components of a permanent way
	3 rd 21/09/2022	Concept of gauge
	4 th 22/09/2022	different gauges prevalent in India
	5 th 23/09/2022	suitability of these gauges under different.
3 rd	1 st 26/09/2022	3.Track materials. 3.1 Rails 3.1.1 Functions and requirement of rails.
	2 nd 27/09/2022	3.1.2 Types of rail sections, length of rails 3.1.3 Rail joints – types, requirement of an ideal joint
	3 rd 28/09/2022	3..1.4 Purpose of welding of rails & its advantages 3.1.5 Creep definition, cause & prevention
	4 th 29/09/2022	3.2 Sleepers 3.2.1 Definition, function & requirements of sleepers 3.2.2 Classification of sleepers 3.2.3 Advantages & disadvantages of different types of sleepers.
	5 th 30/09/2022	3.3 Ballast 3.3.1 Functions & requirements of ballast 3.3.2 Materials for ballast
4 th	1 st 10/10/2022	3.4 Fixtures for Broad gauge 3.4.1 Connection of rails to rail-fishplate, fish bolts 3.4.2 Connection of rails to sleepers
	2 nd 11/10/2022	4.Geometric for Broad gauge 4.1 Typical cross – sections of single
	3 rd	Double broad gauge railway track in cutting

	12/10/2022	
	4 th 13/10/2022	Embankment
	5 th 14/10/2022	4.2 Permanent & temporary land width
5 th	2 nd 18/10/2022	Gradients for drainage
	3 rd 19/10/2022	Super elevation – necessity & limiting valued
	4 th 20/10/2022	Numerical problem
	5 th 21/10/2022	Numerical problem
6 th	3 rd 26/10/2022	Numerical problem
	4 th 27/10/2022	Numerical problem
	5 th 28/10/2022	5.0 Points and crossings
7 th	1 st 31/10/2022	5.1 Definition,
	2 nd 01/11/2022	Necessity of Points and crossings
	3 rd 02/11/2022	5.2 Types of points
	4 th 03/11/2022	& types of crossings with tie diagrams
	5 th 04/11/2022	Diagrams
8 th	3 rd 09/11/2022	6.0 Laying & maintenance of track
	4 th 10/11/2022	6.1 Methods of Laying
	5 th 11/11/2022	Maintenance of track
9 th	1 st 14/11/2022	Details of a permanent way inspector
	2 nd 15/11/2022	Section – B: BRIDGES 7.0 Introductions 7.1 Definitions 7.2 Components of a bridge
	3 rd 17/11/2022	7.3 Classification of bridges. 7.4 Requirements of an ideal bridge
	4 th 18/11/2022	8. Bridge Site investigation, hydrology & planning 8.1 Selection of bridge site
	5 th 21/11/2022	8.2 Bridge alignments
10 th	1 st 22/11/2022	8.3 Determination of flood discharge
	2 nd 23/11/2022	8.4 Waterway & economic span
	3 rd 24/11/2022	8.5 Afflux, clearance & free board 8.6 Collection of bridge design data & sub surface investigation

	4 th 25/11/2022	9.Bridge foundation
	5 th 28/11/2022	9.1 Scour depth minimum depth of foundation 9.2 Types of bridge
11 th	1 st 29/11/2022	pile foundation-, pile driving,
	2 nd 30/11/2022	well foundation – sinking of wells caission foundation
	3 rd 01/12/2022	foundations – spread foundation
	4 th 02/12/2022	9.3 Cofferdams
	5 th 05/12/2022	10.Bridge substructure and approaches 10.1 Types of piers
12 th	1 st 06/12/2022	10.2 Types of abutments
	2 nd 07/12/2022	10.3 Types of wing walls
	3 rd 08/12/2022	10.4 Approaches
	4 th 09/12/2022	11.0 Permanent bridges
	5 th 12/12/2022	11.1 Masonry bridges
13 th	1 st 13/12/2022	11.2 Steel bridges – classification with sketches
	2 nd 14/12/2022	11.4 IRC bridge loading
	3 rd 15/12/2022	12.Culvert & cause ways
	4 th 16/12/2022	12.2 Types of causeways - brief description
	5 th 19/12/2022	PREVIOUS YEAR QUESTION DISCUSSION
14 th	1 st 20/12/2022	PREVIOUS YEAR QUESTION DISCUSSION
	2 nd 21/12/2022	PREVIOUS YEAR QUESTION DISCUSSION
	3 rd 22/12/2022	DOUBT CLEARING CLASS.
	4 th 23/12/2022	PREVIOUS YEAR QUESTION DISCUSSION

Gayatri Sahoo

SIGNATURE OF LECTURE

Susheeta Mishra

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