

PNS SCHOOL OF ENGINEERING & TECHNOLOGY

LESSON PLAN

BRANCH- CIVIL	SEMESTER- 5TH	NAME OF THE FACULTY - Er.SUPRAVA TARAI
SUBJECT- RAILWAY & BRIDGE ENGINEERING	NO OF DAYS PER WEEK -6 CLASS ALLOTTED-60	SEMESTER FROM-14/07/2025 TO 15/11/2025
WEEK	CLASS DAY	THEORY TOPIC
1ST	1ST	Introduction , Railway
	2ND	Railway terminology
	3RD	Advantages of railways
	4TH	Classification of railways
2ND	1ST	Permanent way,
	2ND	Components of a permanent way
	3RD	Concept of gauge
	4TH	Suitability of gauge under different condition
3RD	1ST	Track materials,rails,types of rail sections, length of rails
	2ND	Purpose of welding of rails & its advantages Creep- definition, cause & prevention
	3RD	Sleeper,1 Definition, function & requirements of sleepers
	4TH	Ballast Functions & requirements of ballast Materials for ballast Fixtures for Broad gauge Connection of rails to rail-fishplate, fish bolts Connection of rails to sleepers
4TH	1ST	Geometric for broad gauge
	2ND	Permanent & temporary land width
	3RD	Gradients for drainage
	4TH	Super elevation – necessity & limiting valued
5TH	1ST	Points and crossings
	2ND	Defination and necessity of point and crosssings
	3RD	Types of points
	4TH	Crossings with tie diagrams
6TH	1ST	Lying & maintanance of track
	2ND	Method of Laying & maintenance of track
	3RD	Contuning.....
	4TH	Duties of permanent way inspector
7TH	1ST	Section – B: BRIDGES
	2ND	Defination & component of bridges
	3RD	Components of bridges.continue.....
	4TH	Classification of bridges
8TH	1ST	Requirments of an ideal bridges
	2ND	Bridge site investigation,
	3RD	Hydrology & planning
	4TH	Selection of bridge site, Alignment,
9TH	1ST	Determination of Flood Discharge
	2ND	Waterway & economic span
	3RD	Afflux, clearance & free board
	4TH	Bridge Foundation
10TH	1ST	Bridge foundation.continue...
	2ND	Scour depth minimum depth of foundation
	3RD	Continued...
	4TH	Types of bridge foundations, spread foundation, pile foundation
11TH	1ST	Well foundation – sinking of wells, caisson foundation
	2ND	Continued...
	3RD	Coffer dams.
	4TH	Sinking of wells & coffer dams continued..
12TH	1ST	Bridge substructure and approaches
	2ND	Types of piers
	3RD	Continued...
	4TH	Types of Aboutments
13TH	1ST	Continued...
	2ND	Types of wing walls

13TH	3RD	Continued...
	4TH	Approaches
14TH	1ST	Approaches ..Continued.
	2ND	Culvert & Cause ways . Introduction.
	3RD	Types of culvers – brief description
	4TH	Continued...
	1ST	Types of causeways – brief description
15TH	2ND	Waterway & economics span again discuss & continued.
	3RD	Requirement of ideal bridge ..continued,,,
	4TH	Discuss all the topic of bridge engg, and continued..

LECT SIGN

HOD SIGN

PRINCIPAL SIGN