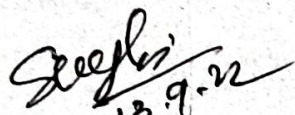



LESSON PLAN FOR WINTER SESSION (2022-23)

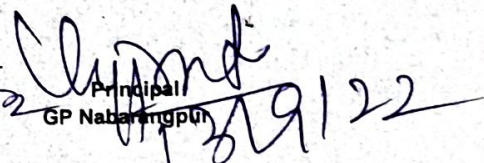
PROGRAMME : CIVIL ENGINEERING			NAME OF THE FACULTY: MS. HARAPRIYA BADANAYAK
COURSE NAME : RAILWAY AND BRIDGE ENGINEERING			SESSION : 2022-23
COURSE CODE : TH.3			DATE : 15/09/22 To 22/12/22
SEMESTER : 5th			
PERIODS/WEEK: 4			
TOTAL PERIODS:52			TOPICS
WEEK	PERIODS	UNITS	
Sept. 3rd Week	1	1 of Sec. A	SECTION- A : RAILWAYS 1. Introduction 1.1 Railway terminology
	2	1 of Sec. A	1.2 Advantages of railways 1.3 Classification of Indian Railways
	3	2 of Sec. A	2. Permanent way 2.1 Definition and components of a permanent way
	4	2 of Sec. A	2.2 Concept of gauge
Sept. 4th Week	1	2 of Sec. A	Different gauges prevalent in India
	2	2 of Sec. A	Suitability of these gauges under different conditions
	3	3 of Sec. A	3. Track materials 3.1 Rails 3.1.1 Functions and requirement of rails
	4	3 of Sec. A	3.1.2 Types of rail sections, length of rails
Oct. 1st Week	1		Puja Holidays
	2		
	3		
	4		
Oct. 2nd Week	1	3 of Sec. A	3.1.3 Rail joints – types, requirement of an ideal joint
	2	3 of Sec. A	3.1.4 Purpose of welding of rails & its advantages
	3	3 of Sec. A	3.1.5 Creep- definition, cause & prevention
	4	3 of Sec. A	3.2 Sleepers
Oct. 3rd Week	1	3 of Sec. A	3.2.2 Classification of sleepers
	2	3 of Sec. A	3.2.3 Advantages & disadvantages of different types of sleepers
	3	3 of Sec. A	3.3 Ballast 3.3.1 Functions & requirements of ballast
	4	3 of Sec. A	3.3.2 Materials for ballast
Oct. 4th Week	1	3 of Sec. A	3.4 Fixtures for Broad gauge
	2	3 of Sec. A	3.4.2 Connection of rails to sleepers
	3	4 of Sec. A	4. Geometric for broad gauge 4.1 Typical cross – sections of single & double broad gauge railway track in cutting and embankment
	4	4 of Sec. A	4.2 Permanent & temporary land width 4.3 Gradients for drainage 4.4 Super elevation – necessity & limiting valued
Nov. 1st Week	1	4 of Sec. A	4.4 Super elevation – necessity & limiting valued
	2	1 of Sec. B	Section- B : BRIDGES 1. Introduction to bridges 1.1 Definitions
	3	1 of Sec. B	1.2 Components of a bridge
	4	1 of Sec. B	1.3 Classification of bridges
Nov. 2nd Week	1	2 of Sec. B	2. Bridge site investigation, hydrology & planning 2.1 Selection of bridge site Alignment
	2	2 of Sec. B	2.2 Determination of Flood Discharge
	3	2 of Sec. B	2.3 Waterway & economic span
	4	2 of Sec. B	2.4 Afflux, clearance & free board
Nov. 3rd Week	1		Internal Assessment Exam
	2	5 of Sec. A	Section- A : RAILWAYS 5. Points and crossings 5.1 Definition, necessity of Points and crossings

	3	5 of Sec. A	5.2 Types of points & crossings with tie diagrams
	4	6 of Sec. A	6. Laying & maintenance of track 6.1 Methods of Laying & maintenance of track 6.2 Duties of a permanent way inspector
Nov. 4th Week	1	6 of Sec. A	6.2 Duties of a permanent way inspector
	2	3 of Sec. B	Section-B : BRIDGES 3. Bridge foundation 3.1 Scour depth minimum depth of foundation
	3	3 of Sec. B	3.2 Types of bridge foundations – spread foundation, pile foundation- well foundation – sinking of wells, caisson foundation
	4	3 of Sec. B	3.3 Cofferdams
Dec. 1st Week	1	4 of Sec. B	4. Bridge substructure and approaches 4.1 Types of piers
	2	4 of Sec. B	4.2 Types of abutments
	3	4 of Sec. B	4.3 Types of wing walls
	4	4 of Sec. B	4.4 Approaches
Dec. 2nd Week	1	5 of Sec. B	5. Culvert & Cause ways 5.1 Types of culverts – brief description
	2	5 of Sec. B	5.2 Types of causeways – brief description
	3		Doubt Clearing Class
	4		Doubt Clearing Class
Dec. 3rd Week	1		Doubt Clearing Class
	2		Previous year question Paper discussion.
	3		Previous year question Paper discussion.
	4		Previous year question Paper discussion.


13/9/22
Concern faculty
Signature


13.9.22
HOD
Civil engineering


13/9/22
Academic Coordinator
GP Nabarangpur


13/9/22
Principal
GP Nabarangpur