LESSON PLAN-RBT

G.B.N GOVT. POLYTECHNIC, NILOKHERI

NAME OF THE FACULTY :

DISCIPLINE : CIVIL ENGG.

SEMESTER $: 5^{TH}$

SUBJECT : RAILWAYS, BRIDGES & TUNNELS

LESSON PLAN DURATION: 15 WEEKS

**WORK LOAD (LECTURE / PRACTICAL) PER WEEK(IN HOURS): LECTURES-05, PRACTICALS -

NIL

WEEK		THEORY
1ST	1 ST DAY	INTRODUCTION TO INDIAN RAILWAY
	2 ND DAY	RAILWAY SURVEYS: FACTORS INFLUENCING THE RAILWAYS ROUTE, BRIEF DESCRIPTION OF VARIOUS TYPES OF RAILWAY SURVEY
	3 RD DAY	CLASSIFICATION OF PERMANENT WAY DESCRIBING ITS COMPONENT PARTS
	4 TH DAY	RAIL GAUGE: DEFINITION, TYPES, PRACTICE IN INDIA
	5 TH DAY	RAILS – TYPES OF RAILS
	1ST DAY	REVISION AND DOUBTS
₂ ND	2 ND DAY ₃ RD	TEST RAIL FASTENINGS: RAIL JOINTS, TYPES OF RAIL JOINTS
	DAY ₄ TH	FASTENINGS: RAIL JOINTS, 1 TPES OF RAIL JOINTS FASTENINGS FOR RAILS, FISH PLATES, BEARING PLATES
	DAY 5 TH	SLEEPERS: FUNCTIONS OF SLEEPERS, TYPES OF SLEEPERS
	DAY 1 ST	REQUIREMENTS OF AN IDEAL MATERIAL FOR SLEEPERS
3 RD	DAY 2 ND DAY	REVISION AND DOUBTS
	3 RD DAY	TEST
	4 TH DAY	BALLAST: FUNCTION OF BALLAST, REQUIREMENTS OF AN IDEAL MATERIAL FOR BALLAST
	₅ TH DAY	CROSSINGS AND SIGNALLINGS: BRIEF DESCRIPTION REGARDING DIFFERENT TYPES OF CROSSINGS/ SIGNALLINGS (LATEST ELECTRONICS OPERATED SIGNAL DEVICES)

ATH ATH 2ND MAINTENANCE AND BOXING OF BALLAST MAINTENANCE GAUGE, TOOLS 3RD DAY WIDTH OF FORMATION ATH DAY SIDE SLOPES, DRAINS, METHODS OF CONSTRUCTION, REQUIREMED DAY BOAY BOAY SIDE SLOPES, DRAINS, METHODS OF CONSTRUCTION, REQUIREMED DAY BOAY STH DAY STH DAY STH DAY STH DAY BRIDGE - ITS FUNCTION AND COMPONENT PARTS, DIFFERENCE BETWEEN A BRIDGE AND A CULVERT 4TH CLASSIFICATION OF BRIDGES THEIR STRUCTURAL ELEMENTS AND SUITABILITY: ACCORDING TO LIFE-PERMANENT AND TEMPORARY ACCORDING TO MATERIAL -TIMBER, MASONRY,	S, EL, NT OF
4TH 2ND DAY TOOLS 3RD EARTH WORK AN DRAINAGE: FEATURES OF RAIL ROAD, BED LEVE WIDTH OF FORMATION 4TH SIDE SLOPES, DRAINS, METHODS OF CONSTRUCTION, REQUIREMENT DAY DRAINAGE SYSTEM 5TH DAY 1ST DAY 1ST DAY 3RD DAY INTRODUCTION TO BRIDGES DAY BRIDGE – ITS FUNCTION AND COMPONENT PARTS, DIFFERENCE BETWEEN A BRIDGE AND A CULVERT 4TH CLASSIFICATION OF BRIDGES THEIR STRUCTURAL ELEMENTS AND SUITABILITY: ACCORDING TO LIFE-PERMANENT AND TEMPORARY ACCORDING TO DECK LEVEL – DECK, THROUGH AND SEMI-THROU	EL,
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5 TH ACCORDING TO MATERIAL –TIMBER, MASONRY,	
5 ^{1H} ACCORDING TO MATERIAL –TIMBER, MASONRY,	
DAY STEEL, RCC, PRE-STRESSED ACCORDING TO	
STRUCTURAL FORM; -	
GRADE SEPERATORS-RAILWAY OVERBRIDGES (ROB), RAILWAY	
UNDERBRIDGE (RUB)	
1ST ARCH TYPE – OPEN SPANDREL AND FILLED SPANDREL BARREL AN	<u>ID</u>
DAY RIB TYPE - SUSPENSION TYPE – UNSTIFFENED AND STIFFENED AND	
TABLE (ITS DESCRIPTION WITH SKETCHES)	,
16 Z RECORDING TO THE COSTITION OF MOTHEST LEGGE ELVEE	
DAY SUBMERSIBLE AND NON SUBMERSIBLE	
3 RD IRC CLASSIFICATION	
DAY DAY	
TV.	
REVISION AND DOOD IS	
DAY	
5 TH TEST	
DAY	
BRIDGE FOUNDATIONS: INTRODUCTION TO OPEN FOUNDATION	
DAY	
ND DUE FOLDING ATION WELL FOLDING ATION	
71h E THE TOCKETHION, WEELT OCKETHION	
DAY	
^{3RD} PIERS, ABUTMENTS AND WINGWALLS	
DAY	
PIERS-DEFINITION, PARTS; TYPES –SOLID (MASONRY AND RCC), OI	PEN
4 TH ABUTMENTS AND WING WALLS – DEFINITION, TYPES OF ABUTMEN	STV
DAY (STRAIGHT AND TEE), ABUTMENT WITH WING WALLS (STRAIGHT,	110
SPLAYED, RETURN AND CURVED)	

	1 7711	
	5 TH	LAUNCHING OF EQUIPMENT BRIDGES
	DAY	
	₁ ST	REVISION AND DOUBTS
	DAY	
	2^{ND}	TEST
	DAY	
TH	₃ RD	BRIDGE BEARINGS PURPOSE OF BEARINGS
₈ TH	DAY	
	₄ TH	
	Γ	TYPES OF DEADINGS. FIVED DI ATE DOCKED AND DOLLED
	DAY	TYPES OF BEARINGS – FIXED PLATE, ROCKER AND ROLLER.
	₅ TH	
	DAY	MAINTENANCE OF BRIDGES
₉ TH	₁ ST	REVISION AND DOUBTS
	DAY	THE TIBIOT THE DOCESTS
	2^{ND}	REVISION AND DOUBTS
	DAY	
	₃ RD	TEST
	DAY	
	₄ TH	INSPECTION OF STEEL AND EQUIPMENT BRIDGES
	DAY	
	₅ TH	ROUTINE MAINTENANCE
	DAY	
	₁ ST	INTRODUCTION TO TUNNELS
TII	DAY	
10 TH	2^{ND}	DEFINITION AND NECESSITY OF TUNNELS
	DAY	
	₃ RD	TYPICAL SECTION OF TUNNELS FOR A NATIONAL HIGHWAY
	DAY	
	₄ TH	TYPICAL SECTION FOR SINGLE AND DOUBLE BROAD GAUGE RAILWAY
	DAY	TRACK
	₅ TH	VENTILATION –NECESSITY
	DAY ₁ ST	DEVICION AND DOUBTS
	1	REVISION AND DOUBTS
11TH	DAY 2ND	REVISION AND DOUBTS
11	DAY	KE VISION AND DOOD IS
	₃ RD	TEST
	DAY	11,51
	₄ TH	METHODS OF VENTILATION BY BLOWING
	DAY	
	5TH	EXHAUST AND COMBINATION OF BLOWING AND EXHAUST
	DAY	
	₁ ST	TEST
	DAY	
12 TH	2^{ND}	TEST
	DAY	
	₃ RD	DRAINAGE METHOD OF DRAINING WATER IN TUNNELS
	DAY	

	$_{4}$ TH	REVISION OF PILE FOUNDATION, WELL FOUNDATION
	DAY	, , , , , , , , , , , , , , , , , , , ,
	₅ TH	REVISION OF ABUTMENTS AND WING WALLS – DEFINITION, TYPES OF
	DAY	ABUTMENTS (STRAIGHT AND TEE), ABUTMENT WITH WING WALLS
		(STRAIGHT, SPLAYED, RETURN AND CURVED)
	₁ ST	LIGHTING OF TUNNELS
	DAY	
	2^{ND}	REVISION OF RAILWAY SURVEYS: FACTORS INFLUENCING THE
13 TH	DAY	RAILWAYS ROUTE, BRIEF DESCRIPTION OF VARIOUS TYPES OF
	, DD	RAILWAY SURVEY
	₃ RD	TEST
	DAY	
	₄ TH	REVISION OF CLASSIFICATION OF PERMANENT WAY DESCRIBING ITS
	DAY	COMPONENT PARTS
	₅ TH	TEST
	DAY	11.51
	₁ ST	REVISION OF RAIL GAUGE: DEFINITION, TYPES, PRACTICE IN INDIA
TII	DAY	
14 TH	2^{ND}	TEST
	DAY	
	₃ RD	REVISION OF RAILS – TYPES OF RAILS
	DAY	
	₄ TH	REVISION OF RAIL FASTENINGS: RAIL JOINTS, TYPES OF RAIL JOINTS
	DAY	
	₅ TH	REVISION OF FASTENINGS FOR RAILS, FISH PLATES, BEARING PLATES
	DAY ₁ ST	TECT
	1	TEST
15 TH	DAY 2ND	TEST
	DAY	11331
	₃ RD	REVISION OF SLEEPERS: FUNCTIONS OF SLEEPERS, TYPES OF SLEEPERS
	DAY	REVISION OF SELECTIONS OF SELECTIONS OF SELECTIONS
	4TH	REVISION OF CROSSINGS AND SIGNALLINGS: BRIEF DESCRIPTION
	DAY	REGARDING DIFFERENT TYPES OF CROSSINGS/ SIGNALLINGS (LATEST
		ELECTRONICS OPERATED SIGNAL DEVICES)
	₅ TH	REVISION AND DOUBTS
	DAY	