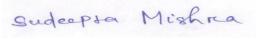
	PNS SCHOOL OF ENGINEERING & TECHNOLOGY					
LESSION PLAN						
BRANCH- CIVIL	SEMESTER-4TH	NAME OF THE FACULTY-SUDEEPTA MISHRA				
SUBJECT- HIGHWAY ENGINEERIN G (TH-4)	NO OF DAYS PER WEEK -6 CLASS ALLOTTED-75	SEMESTER FROM 13.02.2023 TO 24.05.2023				
WEEK	CLASS DAY	THEORY TOPIC				
	1ST	Introduction Importance of Highway transportation: importance organizations like Indian roads congress.				
	2ND	Ministry of Surface Transport, Central Road Research Institute				
FREBUARY-3RI	3RD	Functions of Indian Roads Congress				
	4TH	IRC classification of roads				
	5TH	Organisation of state highway department.				
	1ST	Road Geometrics Glossary of terms used in geometric and their importance, right of way,				
	2ND	formation width, road margin, road shoulder, carriage way,				
4TH	3RD	side slopes, kerbs,formation level, camber and gradient.				
4111	4TH	Design and average running speed, stopping and passing sight distance				
	5TH	CONTINUING				
	6TH	Necessity of curves, horizontal and vertical curves including transition curves and super elevation, Methods o f providing super elevation				
	1ST	CONTINUING				
5TH -	2ND	CONTINUING				
	1ST	Derivative pratice				
MARCH -1ST	2ND	Derivative pratice				
	3RD	Road Materials  Difference types of road materials in use: soil, aggregates, and binders				
<b></b>	4TH	Function of soil as highway Subgrade				
2ND	1ST	California Bearing Ratio: methods of finding CBR valued in the laborator a nd at site and their significance				
2110	4TH	Testing aggregates: Abrasion test,				
	5TH	impact test,				

	1ST	crushing strength test			
	2ND	crushing strength test			
		Road Pavements			
	3RD	Road Pavement: Flexible and rigid pavement,			
3RD		their merits and demerits,typical cross			
	4TH	sections, functions of various components			
		Flexible pavements			
	5TH	Sub grade preparation			
	6TH	Setting out alignment of road, setting out bench marks, control pegs for embankment and cutting,			
	1ST	.construction of embankment,			
	2ND	compaction, stabilization, preparation of subgrade			
		methods of checking camber, gradient			
	3RD	and alignment as per recommendations			
4TH		of IRC, equipment used for subgrade preparation			
	4711	Sub base Course			
	4TH	Necessity of sub base, stabilized sub base, purpose of stabilization			
	5TH	Types of stabilization-Mechanical stabilization			
	6TH	Lime stabilization			
	1ST	Cement stabilization			
	2ND	Fly ash stabilization			
		Base Course:Preparation of base course			
	3RD	Brick soling, stone soling and metalling,			
5TH		,			
		Water			
	5TH	Water			
		Bound Macadam and			
-	1CT	wetmix Macadam,			
<u> </u>	1ST	Bituminous constructions: Surfacing:			
	2ND	Surface dressing			
APRIL-2ND		(i) Premix carpet and (ii) Semi dense carpet			
	3RD	Bituminous concrete			
	4TH	Grouting			
<u> </u>		Rigid Pavements:			
	6TH	Concept of concrete roads as per IRC specifications			
	1ST	repeate preivious class			
		Hill Roads			
	2ND	Introduction: Typical cross sections showing all details			
3RD		of a typical hill road in cut, partly in cutting and partly in filling.			
	3RD	DO			
	4TH	Breast Walls,			
	6TH	Retaining walls,			
	1ST	different types of bends			
	2ND	Road Drainage:			
лтн	ZINU	Necessity of road drainage work			

4111	3RD	cross drainage works			
	4TH	Surface and sub-surface drains and storm water drains. Location.			
	5TH	spacing and typical details of side drains,			
	1ST	side ditches for surface drainage			
	2ND	intercepting drains, pipe drains in hill roads,			
	3RD	details of drains in cutting embankmen			
5TH	4TH	typical cross sections.			
	5TH	Road Maintenance :Common types of road failures			
	6TH	their causes and remedies			
	1ST	Maintenance of bituminous road such as patch work and resurfacing			
MAY-1ST	2ND	Maintenance of concrete roads –filling cracks, repairing joints, maintenance			
IVIAT-131	3RD	continuing			
	4TH	continuing			
	6TH	maintenance of traffic control devices			
	1ST	Basic concept of traffic study,			
	2ND	Traffic safety and traffic control signal			
	3RD	continuing			
2ND	4TH	Construction equipments.INTRODUCTION			
	5TH	Preliminary ideas of the following plant and equipment:			
	6TH	Hot mixing plan			
	1ST	Tipper, tractors (wheel and crawler) scraper, bulldozer, dumpers, shovels, graders, roller dragline			
3RD	2ND	CONTINUING			
	3RD	Asphalt mixer and tar boilers			
	4TH	Road pavers			
	5TH	Modern construction equipments for roads			
	6TH	DO			
	1ST	DOUT CLEARING CLASS			
4TH	2ND	NOTE CHECKING CLASS			
4111	3RD	SIMPLE TEST IN CLASS &PREVIOUS YEAR QUESTION DISSCUSSION IN CLASS			





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