

# BHARAT INSTITUTE OF ENGINEERING & TECHNOLOGY

**SIVARAM VIHAR, GHATAKESWAR HILLS  
MOHADA, BERHAMPUR (GM.)**



## STUDENT'S ATTENDANCE REGISTER

Time Day	10:45 11:30	12:25 1:15			
	MON	✓			
TUE		✓			
WED	✓	✓			
SAT	✓				

Year/ Session	2 <sup>nd</sup> Yr.
Semester & Branch	4 <sup>TH</sup> Sem. Civil
Subject with Code	Highway Engineering. (Th-4)
Name of the Faculty Member	Suneeta Samanta singha

# B.I.E.T., COURSE PLAN

Month	Week	Class Day	Theory/Practical Topic
FEBRUARY			<u>CHAPTER-I</u>
			<u>INTRODUCTION</u>
		14.02.2023	Importance of Highway transportation:
		15.02.2023 (2)	importance organizations like Indian roads. Congress, Ministry of surface Transport, Central Road Research Institute
		18.02.2023	Functions of Indian Road Congress
		20.02.2023	IRC Classification of Roads
			Organisation of State Highway department
			<u>CHAPTER -II</u>
			<u>ROAD GEOMETRICS</u>
		21.02.2023	Glossary of terms used in Geometric
	22.02.2023 (2)	& their importance	
	25.02.2023	Right of Way, Formation Width,	
	27.02.2023	Road Margin, Road Shoulder	
	28.02.2023	Carriage way, side slopes	
	1.03.2023 (2)	Kerbs, Formation level	

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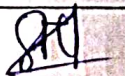
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Month	Week	Class Day	Theory/Practical Topic
MARCH	1 <sup>st</sup>	4.03.2023	Camber & Gradient
		6.03.2023	Design & average running speed
		7.03.2023	Stopping & passing sight distance
		8.03.2023	Necessity of curves, horizontal &
		(2)	vertical curves including transition
		11.03.2023	Curves
		13.03.2023	Superelevation
		14.03.2023	Methods of providing super-elevation
		15.03.2023	
		(2)	
		18.03.2023	
		20.03.2023	
		21.03.2023	
		22.03.2023	

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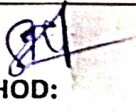




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Month	Week	Class Day	Theory/Practical Topic
			<u>CHAPTER - 3</u> ROAD MATERIALS
		22.03.2023	Difference types of road materials in use: soil, aggregate & binders
		29.03.2023	
		24.03.2023	Function of soil as highway subgrade
		25.03.2023	California Bearing Ratio: methods of finding CBR valued in the laboratory & at site & their significance
		27.03.2023	
		28.03.2023	
		29.03.2023 (2)	Testing of Aggregates:
		30.03.2023	Abrasion test
			Impact test
			Crushing strength test
			Water absorption test
			Soundness test

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Month	Week	Class Day	Theory/Practical Topic
APRIL			<u>CHAPTER-4</u> <u>ROAD PAVEMENTS</u>
		1.04.2023	Road Pavement: Flexible & Rigid pavements - their merits & demerits, typical cross sections, functions of various components Flexible Pavements:
		3.04.2023	- Subgrade Preparation: Setting out alignment of road, setting out bench marks, control pegs for embankment & cutting, borrow pits, making profile of embankment, construction of embankment, compaction, stabilization, preparation of subgrade
		4.04.2023	(2) Methods of checking camber, gradient & alignment as per recommendations of IRC, equipment used for subgrade preparation.
		5.04.2023	
		8.04.2023	- Sub base Course Necessity of sub base, stabilization of sub base, purpose of stabilization
		10.04.2023	Type of Stabilization • Mechanical Stabilization

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Month	Week	Class Day	Theory/Practical Topic
		11.04.2023	Lime Stabilization Cement Stabilization
		12.04.2023 (2)	Fly ash Stabilization • Base Course:-
		15.04.2023	Preparation of base course, Brick soling, Stone soling & metalling, Water Bound Macadam & Wet-mix Macadam Bituminous Constructions: Different types
		17.04.2023	Surfacing: • Surface dressing (i) Premix Carpet (ii) Semi dense Carpet
		18.04.2023	• Bituminous Concrete • Grouting Rigid Pavements: Concept of concrete roads as per IRC Specification.

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# B.I.E.T., COURSE PLAN

Month	Week	Class Day	Theory/Practical Topic
			<u>CHAPTER-5</u> <u>HILL ROADS</u>
		19.04.2023 (2)	Introduction: Typical Cross-sections showing all details of a typical hill road in cut
		20.04.2023	
		22.04.2023	Partly in cutting & Partly in filling
		24.04.2023	Breast walls
		25.04.2023	Retaining walls
		26.04.2023	Different types of bends
			<u>CHAPTER-6</u> <u>ROAD DRAINAGE</u>
		26.04.2023	Necessity of Road drainage work. Cross drainage works
		29.04.2023	Surface & Subsurface drains & Storm water drains
		1.05.2023	Location, Spacing & typical details of side drains
		2.05.2023	Side ditches for surface drainage, intercepting drains
		3.05.2023	Pipe drains in hill Roads
		6.05.2023	Details of drains in cutting embankment

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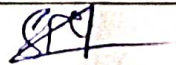
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Month	Week	Class Day	Theory/Practical Topic
		8.05.2023	typical cross sections  <u>CHAPTER-7</u> <u>ROAD MAINTENANCE</u>
		9.05.2023	Common types of Road failures - their causes & remedies
		10.05.2023 (2)	Maintenance of bituminous road such as patch work & resurfacing
		13.05.2023	Maintenance of concrete roads - filling cracks, repairing joints, maintenance
		15.05.2023	of shoulders. Maintenance of traffic control devices.
		16.05.2023	Basic concept of traffic study
		17.05.2023	Traffic safety & traffic control signal

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Month	Week	Class Day	Theory/Practical Topic
			<u>CHAPTER - 8</u> <u>CONSTRUCTION EQUIPMENTS</u>
		17.05.2023	Hot mixing plant
		18.05.2023	Tipper, tractors (wheel & crawler)
		20.05.2023	Scraper, bulldozer, dumpers, shovels graders, roller, dragline
		22.05.2023	Asphalt mixer & tar boilers
		23.05.2023	Road pavers
		(2)	Moderen construction equipments for roads.

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