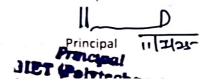
| Discipline :- CIVIL ENGG. | Semester:-5 TH | Name of the Teaching Faculty:- |
|------------------------------|---------------------------------------|---|
| Subject:- Railway and | No of Days/per Week Class Allotted | SWAGATIKA SAMAL(LECTURER) Semester From:- 14/07/2025 To:- 15/11/2025 |
| Bridge Engg.(Th.3) | :-04 | No of Weeks:- 18 |
| Week | Class Day | Theory/ Practical Topics |
| 1 st | 1 st | Section-A: RAILWAYS 1.Introduction :1.1Railway terminology |
| | 2 nd | 1.2Advantages of railways 1.3Classification of Indian Railways |
| | 3 rd | 2. Permanent way 2.1Definition |
| | 4th | 2.2components of a permanent way |
| 2 nd | 1st · | 2.3Concept of gauge |
| | 2 nd | 2.4 gauges prevalent in India |
| | 3rd | 2.5suitability of these gauges under different |
| | 4 th | 3.Track materials 3.1Rails 3.1.1Functions and requirement of rails |
| 3rd | 1 st | 3.1.2Types of rail sections , length of rails 3.1.31.3Rail joints – types, requirement of an ideal joint |
| | 2 nd | 31.4 Purpose of welding of rails & its advantage 3.1.5 Creep definition, cause & prevention |
| | 3rd | 3.2 Sleepers 3.2.1Definition, function & requirements of sleepers 3.2.2 Classification of sleepers 3.2.3 Advantages & disadvantages of different types of sleepe |
| | 4 th | 3.3 Ballast 3.3.1 Functions & requirements of ballast 3.3.2 Materials for ballast |
| 4th | 1 st | 3.4 Fixtures for Broad gauge3.4.1 Connection of rails to rail-fishplate, fish bolts3.4.2 Connection of rails to sleepers |
| | 2 nd | 4.Geometric for Broad gauge 4.1Typical cross – sections of single |
| | 3rd | double broad gauge railway track in cutting |
| | 4th | embankment |
| | 1st | 4.2 Permanent & temporary land width |
| <u>.</u> L | 2nd | 4.3 Gradients for drainage |
| 5th 6th | 3rd | 4.4Super elevation – necessity & limiting valued |
| | 4th | Numerical problem |
| | 1st | Numerical problem |
| | 2nd | Numerical problem |
| | 3rd | Numerical problem |
| | 4th | 5.0 Points and crossings |
| 7 th | 1 st | 5.1 Definition |
| | 2 nd | necessity of Points and crossings |
| | 3rd | 5.2 Types of points types of crossings with tie diagrams |

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| | 1st | crossings with tie diagrams |
|------------------|-----------------|---|
| gth | 2nd | 6.0 Laying & maintenance of track |
| | 3rd | 6.1 Methods of Laying |
| | 4th | maintenance of track |
| gth | 1st | 6.2Duties of a permanent way inspector |
| | 2nd | Introduction to bridges |
| | 3rd | 1.1 Definitions |
| | 4th | 1.2 Components of a bridge |
| ₁₀ th | 1st | 1.3 Classification of bridges |
| | 2nd | 1.4 Requirements of an ideal bridge |
| | 3rd | Previous year question discussion |
| | 4th | 2. Bridge site investigation, hydrology & planning introduction |
| | 1st | 2.1 Selection of bridge site, |
| 11 th | 2 nd | 2.2 varios type of aalignment |
| 11 | 3rd | 2.3 Determination of Flood Discharge |
| | 4th | 2.4 problem practice |
| | 1st | 2.5previous year problem practice |
| a a th | 2nd | 2.6Afflux |
| 12 th | 3rd | 2.7 various type of afflux |
| | 4th | 2.8clearance & free board |
| | 1st | 3. Bridge foundation |
| | 2nd | |
| 13 th | | 3.1Scour depth concept |
| | 3rd | 3.2minimum depth of foundation |
| | 4th | 3.3 problem practice |
| | 1st | 3.4 Types of bridge foundations |
| ₁₄ th | 2 nd | 3.5spread foundation |
| 4 7 | 3rd | 3.6 pile foundation |
| | 4th | 3.7 Types of pile foundation |
| | 1 st | 3.8 sinking of wells |
| 1cth | 2 nd | Previous year question discussion |
| 15 th | 3rd | 3.9 caission foundation |
| | 4th | 3.10 coffer dam |
| | 1 st | 3.11Types of coffer dam |
| 16 th | 2 nd | 3.12 assignment question disussion |
| 16 | 3rd | Bridge substructure and approaches |
| | 4th | 4.1 Types of piers |
| | 1 st | 4.2 Types of abutments |
| a=th | 2 nd | 4.3 Types of wing walls |
| 17 th | 3rd | 4.4 Approaches |
| | 4th | 5.Culvert & Cause ways |
| | 1 st | 5.1 Types of culverts |
| - • h | 2 nd | 5.2brief description |
| 18 th | 3rd | Previous year question discussion |
| | 4th | Previous year question discussion |

S. Camal Lecturer



17.07.25 Sr.Lecturer

Sr. Lecturer
Civil Engg. Dept:
G.I.E.T(Poly), Jegatpur, Ctc