

NM Institute Of Engineering and Technology, Bhubaneswar
DEPARTMENT: CIVIL

LESSON PLAN: Academic Year 2022-23 (even Semester)

COURSE: DIPLOMA

SEMESTER: 4th

Faculty Name: ASHIMA MOHANTY

Subject/Code: HIGHWAY ENGINEERING

| Sl. No. | Name of the Topic to Cover | Text Book | Teaching Method | Remark |
|---------|--|-----------|-----------------|--------|
| 1 | History of Indian Railways, Component parts of railway | T1 | P | OK |
| 2 | Railway Terminology | T2 | G | OK |
| 3 | Wheel and axis arrangements | T2 | P | OK |
| 4 | Coning of wheels, Various resistances and their | T3 | G | OK |
| 5 | Hauling evaluation capacity and tractive effort, problems . | T1 | G | OK |
| 6 | stresses in rail, sleepers, ballast and formation | R1 | G | OK |
| 7 | Permanent way component parts : Types of rail | T2 | G | OK |
| 8 | ection creep, wear and failure in rail Rail joints, bearing plates | R1 | G | OK |
| 9 | ection creep, wear and failure in rail Rail joints, bearing plates | T1 | G | OK |
| 10 | Ballast requirements, Specifications, Formation | T2 | P | OK |
| 11 | Geometric design: Alignment | R1 | G | OK |
| 12 | horizontal curves, super elevation, Numerical | T1 | P | OK |
| 13 | equilibrium cant and cant deficiency, Numerical | T2 | G | OK |
| 14 | length of transition curves, Numerical | T3 | G | OK |
| 15 | Gradients and grade compensation, Numerical | T1 | G | OK |
| 16 | vertical curve | T2 | G | OK |
| 17 | Point and Crossing | T2 | P | OK |
| 18 | Design of simple turn out | T1 | G | OK |
| 19 | Numerical related to turn out | R1 | G | OK |
| 20 | various types of track junction and their | R2 | G | OK |
| 21 | Types of signalling Control of train movement | R1 | G | OK |

