

GOVERNMENT POLYTECHNIC, SAMBALPUR (RENGALI)				
NAME OF THE FACULTY: Miss. Pinky Sahu (PTGF), Civil Engineering				
LESSON PLAN OF HIGHWAY ENGG.(TH-4) 4TH SEM, CIVIL ENGG FOR SUMMER 2022 W.E.F. 10.03.2022				
DATE	WEEK NO.	TOPIC TO BE COVERED	PERIODS ASSIGNED PER TOPIC	PERIODS AVAILABLE PER WEEK
10.03.22 TO 12.03.22	W-1	Introduction 1.1 Importance of Highway transportation: importance organizations like Indian roads congress, Ministry of Surface Transport, Central Road Research Institute. 1.2 Functions of Indian Roads Congress 1.3 IRC classification of roads 1.4 Organisation of	5	5
14.03.22 TO 17.03.22	W-2	2.0-Road Geometrics. 2.1- Glossary of term used in geometrie and their importance , right of way formation width , road margin, road shoulder, carriage	6	5
21.03.22 TO 26.03.22	W-3	2.2 Design and average running speed, stopping and passing sight distance elevation, Methods o f providing super – elevation	6	5
28.03.22 To 02.04.22	W-4	2.3 Necessity of curves, horizontal and vertical curves including transition curves and super	8	5
11.04.22 TO 16.04.22	W-5	3 Road Materials 3.1 Difference types of road materials in use: soil, aggregates, and binders 3.2 Function of soil as highway Subgrade	4	5
18.04.22 TO 23.04.22	W-6	3.3 California Bearing Ratio: methods of finding CBR valued in the laboratory and at site and their significance 3.4 Testing aggregates: Abrasion	5	5
25.04.22 TO 30.04.22	W-7	Road Pavements 4.1 Road Pavement: Flexible and rigid pavement, their merits and demerits, typical cross-sections, functions of various components Flexible pavements:	4	5
02.05.22 TO 07.05.22	W-8	4.2 Sub-grade preparation: Setting out alignment of road, setting out bench marks, control pegs for embankment and cutting, borrow pits, making profile of	5	5
09.05.22 TO 14.05.22	W-9	4.3 Sub base Course: Necessity of sub base, stabilized sub base, purpose of stabilization (no designs) Types of stabilization ☐ Mechanical stabilization ☐ Lime stabilization ☐ Cement stabilization ☐ Fly ash stabilization 4.4 Base Course: Preparation of base course,	4	5

17.05.22 TO 21.05.22	W-10	4.5 Surfacing: ☐ Surface dressing (i) Premix carpet and (ii) Semi dense carpet ☐ Bituminous concrete ☐ Grouting 4.6 Rigid Pavements: Concept of concrete roads as per IRC specifications	4	4
23.05.22 TO 28.05.23	W-11	Hill Roads: 5.1 Introduction: Typical cross-sections showing all details of a typical hill road in cut, partly in cutting and partly in filling 5.2 Breast Walls, Retaining walls, different types of bends	3	5
31.05.22 TO 04.06.22	W-12	Road Drainage: 6.1 Necessity of road drainage work, cross drainage works 6.2 Surface and sub-surface drains and storm water drains. Location, spacing and typical details of side drains, side ditches for surface drainage, intercepting drains, pipe drains in hill roads, details of drains in cutting embankment, typical cross sections.	3	5
06.06.22 TO 11.06.22	W-13	Road Maintenance : 7.1 Common types of road failures – their causes and remedies 7.2 Maintenance of bituminous road such as patch work and resurfacing	4	5
13.06.22 TO 18.06.22	W-14	7.3 Maintenance of concrete roads – filling cracks, repairing joints, maintenance of shoulders (berm), maintenance of traffic control devices 7.4 Basic concept of traffic study, Traffic safety and traffic	3	5
20.06.22 TO 25.06.22	W-15	8.0- Construction equipments: 8.1- Hot mixing plant. 8.2- Tipper, tractors(wheel and crawler) scraper, bulldozer, dumpers, shovels, graders, roller dragling.	4	5
27.06.22 TO 30.06.22	W-16	8.3 Asphalt mixer and tar boilers 8.4 Road pavers 8.5 Modern construction equipments for roads.	3	5

Pahu
10/03/22

Signature of Concerned Faculty

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10/03/22

C/S Signature of Senior Lect./ HOD (E)