NILASAILA INSTITUTE OF SCIENCE & TECHNOLOGY
SERGARH-756060, BALASORE (ODISHA)
(Approved by AICTE& affiliated to SCTE&VT, Odisha)

LESSON PLAN

SUBJECT: Th-2 (AUTOMOTIVE TRANSMISSION)

Name Of The Faculty :- Er. Nihar Ranjan Sahoo
Branch :- Automobile Engineering **Semester :-** 5th
Session :- 2025-26 **Examination :-** 2025 (W)

CHAPTER WISE DISTRIBUTION OF PERIODS

Sl.No.	Name of the chapter as per the Syllabus	No. of Periods as per the Syllabus	No. of periods actually needed
1	Clutch	8	10
2	Gear Box	8	12
3	Propeller Shaft	8	10
4	Differential	8	10
5	Rear Axle	8	10
6	Two Wheeler	8	9
7	Performance of automobile	12	14
	Total Period:	60	75

Nihar 10/07/2025
Sign of Faculty

Sukhilar 10/07/2025
Sign of H.O.D.

Name of the programme: Diploma in AUTOMOBILE ENGINEERING	Semester: 5th	**Name of the Teaching Faculty:** Er. Nihar Ranjan Sahoo	
		Academic Year : 2025-26 **Examination :** 2025 (W)	
Course Code: TH-2	**Course Year:** Third Year	**No. of Classes Alloted Per Week :**	5
		Planned Classes Required to Complete the Course	75

Week	Class Day	Topics to be Covered
1st	1st	Introduction to AUTOMOTIVE TRANSMISSION .
	2nd	**1. Clutch** 1.1 Introduction, requirement of clutch, types of clutch.
	3rd	Types of clutch
	4th	1.2 Clutch operation.
	5th	1.3 Clutch components, clutch facing.
2nd	1st	1.3 Clutch components, clutch facing.
	2nd	1.4 Clutch problem & adjustment.
	3rd	1.4 Clutch problem & adjustment.
	4th	1.5 Fluids fly wheel & coupling.
	5th	1.5 Fluids fly wheel & coupling.
3rd	1st	Revision .
	2nd	**2. Gear Box** 2.1 Introduction, functions & types of transmission.
	3rd	2.1 Introduction, functions & types of transmission.
	4th	2.2 Sliding mesh & constant mesh gear box.
	5th	2.2 Sliding mesh & constant mesh gear box.
4th	1st	2.2 Sliding mesh & constant mesh gear box.
	2nd	2.3 Epicyclic gear box over drive.
	3rd	2.3 Epicyclic gear box over drive.
	4th	2.3 Epicyclic gear box over drive.
	5th	2.4 Free-wheel drive, selector mechanism.
5th	1st	2.4 Free-wheel drive, selector mechanism.
	2nd	2.5 Fluid torque converter.
	3rd	Revision .

Week	Class Day	Topics to be Covered
5th	4th	**3. Propeller shaft** 3.1 Introduction definition & types of propeller shaft.
	5th	3.1 Introduction definition & types of propeller shaft.
6th	1st	3.1 Introduction definition & types of propeller shaft.
	2nd	3.2 Universal joints & its types.
	3rd	3.2 Universal joints & its types.
	4th	3.2 Universal joints & its types.
	5th	3.2 Universal joints & its types.
7th	1st	3.3 Sliding joint.
	2nd	3.3 Sliding joint.
	3rd	Revision .
	4th	**4. Differential** 4.1 Function of differential gear box.
	5th	4.1 Function of differential gear box.
8th	1st	4.2 Types of differential.
	2nd	4.2 Types of differential.
	3rd	4.3 Constructional details of a differential.
	4th	4.3 Constructional details of a differential.
	5th	4.3 Constructional details of a differential.
9th	1st	4.4 Study & inspection of differential.
	2nd	4.4 Study & inspection of differential.
	3rd	Revision .
	4th	**5. Rear Axle** 5.1 Definition of rear axle, supporting of rear axle.
	5th	5.1 Definition of rear axle, supporting of rear axle.
10th	1st	5.2 Rear axle drives such as Hotchkiss drive, torque tube drive etc.
	2nd	5.2 Rear axle drives such as Hotchkiss drive, torque tube drive etc.
	3rd	5.2 Rear axle drives such as Hotchkiss drive, torque tube drive etc.
	4th	5.3 Types of rear axle.
	5th	5.3 Types of rear axle.
11th	1st	5.4 Rear axle casing.
	2nd	5.4 Rear axle casing.

Week	Class Day	Topics to be Covered
11th	3rd	Revision .
	4th	**6. Two wheeler** 6.1 Power transmission system of moped.
	5th	6.1 Power transmission system of moped.
12th	1st	6.2 Power transmission system of scooter.
	2nd	6.2 Power transmission system of scooter.
	3rd	6.3 Power transmission system of motor cycle.
	4th	6.3 Power transmission system of motor cycle.
	5th	6.4 Power transmission system of bullet.
13th	1st	6.4 Power transmission system of bullet.
	2nd	Revision .
	3rd	**7. Performance of Automobile** 7.1 Power for propulsion resistances for vehicle.
	4th	7.1 Power for propulsion resistances for vehicle.
	5th	7.2 Traction & tractive effort, road performance curves.
14th	1st	7.2 Traction & tractive effort, road performance curves.
	2nd	7.2 Traction & tractive effort, road performance curves.
	3rd	7.3 Acceleration gradiability & draw-bar pull.
	4th	7.3 Acceleration gradiability & draw-bar pull.
	5th	7.3 Acceleration gradiability & draw-bar pull.
15th	1st	7.4 Calculation of equivalent weight.
	2nd	7.4 Calculation of equivalent weight.
	3rd	7.5 Calculation of maximum traffic effort.
	4th	7.5 Calculation of maximum traffic effort.
	5th	Revision .

10/07/2025

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