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

# LESSON PLAN

## SUBJECT:AUTOMOBILE ELECTRICITY(TH-3)

**Name Of The Faculty :-** Er. Ramakanta Sethi & Er.Bijaya Kumar Behera
**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 | Storage battery | 6 | 8 |
| 2 | Starting System | 6 | 7 |
| 3 | Generating System | 10 | 11 |
| 4 | Alternator | 5 | 5 |
| 5 | Ignition System | 15 | 18 |
| 6 | Light | 6 | 7 |
| 7 | Accessories &Control | 6 | 6 |
| 8 | Wiring System | 6 | 13 |
| | Total Period: | 60 | 75 |

10/7/2025 Bijaya 10.07.25

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. Ramakanta Sethi & Er.Bijaya Kumar Behera | |
|---|---|---|---|
| | | **Academic Year :** 2025-26 **Examination :** 2025 (W) | |
| **Course Code:** TH-3 | **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 Automobile Electricity. |
| | 2nd | **1. Storage Battery**<br>1.1 Purpose and types of battery. |
| | 3rd | 1.1 Purpose and types of battery. |
| | 4th | 1.2 Construction capacity and charging of battery. |
| | 5th | 1.2 Construction capacity and charging of battery. |
| 2nd | 1st | 1.2 Construction capacity and charging of battery. |
| | 2nd | 1.3 Testing servicing and maintenance of battery. |
| | 3rd | 1.3 Testing servicing and maintenance of battery. |
| | 4th | **2. Starting System**<br>2.1 Principle and construction of starter motor. |
| | 5th | 2.1 Principle and construction of starter motor. |
| 3rd | 1st | 2.2 Drive arrangement and control. |
| | 2nd | 2.2 Drive arrangement and control. |
| | 3rd | 2.3 Servicing and maintenance of starter motor. |
| | 4th | 2.3 Servicing and maintenance of starter motor. |
| | 5th | 2.3 Servicing and maintenance of starter motor. |
| 4th | 1st | **3. Generating system**<br>3.1 Flemings right hand rule and Lenz's law. |
| | 2nd | 3.1 Flemings right hand rule and Lenz's law. |
| | 3rd | 3.2 Principle and constructional details of generator. |
| | 4th | 3.2 Principle and constructional details of generator. |
| | 5th | 3.2 Principle and constructional details of generator. |
| 5th | 1st | 3.2 Principle and constructional details of generator. |
| | 2nd | 3.3 Current and voltage regulator. |
| | 3rd | 3.3 Current and voltage regulator. |

| Week | Class Day | Topics to be Covered |
|---|---|---|
| 5th | 4th | 3.3 Current and voltage regulator. |
| | 5th | 3.4 Cut-out relay, routine maintenance of generator. |
| 6th | 1st | 3.4 Cut-out relay, routine maintenance of generator. |
| | 2nd | **4. Alternator**<br>4.1 Principle and construction of alternator. |
| | 3rd | 4.1 Principle and construction of alternator. |
| | 4th | 4.2 Maximum R.M.S. and average value. |
| | 5th | 4.2 Maximum R.M.S. and average value. |
| 7th | 1st | 4.3 Maintenance of alternator. |
| | 2nd | **5. Ignition System**<br>5.1 Principle and components (induction coil, contact breaker, spark plug, distributor and condenser) of spark ignition system. |
| | 3rd | 5.1 Principle and components (induction coil, contact breaker, spark plug, distributor and condenser) of spark ignition system. |
| | 4th | 5.1 Principle and components (induction coil, contact breaker, spark plug, distributor and condenser) of spark ignition system. |
| | 5th | 5.1 Principle and components (induction coil, contact breaker, spark plug, distributor and condenser) of spark ignition system. |
| 8th | 1st | 5.1 Principle and components (induction coil, contact breaker, spark plug, distributor and condenser) of spark ignition system. |
| | 2nd | 5.1 Principle and components (induction coil, contact breaker, spark plug, distributor and condenser) of spark ignition system. |
| | 3rd | 5.2 Electronics spark timing computer controlled coil ignition system operation |
| | 4th | 5.2 Electronics spark timing computer controlled coil ignition system operation |
| | 5th | 5.2 Electronics spark timing computer controlled coil ignition system operation |
| 9th | 1st | 5.3 Electronics ignition system with distributor/distributer less. |
| | 2nd | 5.4 Types of ignition system such as:- Coil ignition system. |
| | 3rd | 5.5 Magnet ignition system. |
| | 4th | 5.6 Electronics ignition system, |
| | 5th | 5.7 Electronics ignition system, |
| 10th | 1st | 5.8 Electronics ignition system, |
| | 2nd | 5.9 Electronics ignition system, |
| | 3rd | 5.5 Ignition system servicing and fault diagnosis. |
| | 4th | 5.5 Ignition system servicing and fault diagnosis. |
| | 5th | **6. Light**<br>6.1 Setting of headlights. |

| Week | Class Day | Topics to be Covered |
|---|---|---|
| 11th | 1st | 6.1 Setting of headlights. |
| | 2nd | 6.2 Tail and stoplights. |
| | 3rd | 6.2 Tail and stoplights. |
| | 4th | 6.2 Tail and stoplights. |
| | 5th | 6.3 Indicator and dim deeper mechanism. |
| 12th | 1st | 6.3 Indicator and dim deeper mechanism. |
| | 2nd | **7. Accessories & Control**<br>7.1 Electric horn and screen wiper. |
| | 3rd | 7.1 Electric horn and screen wiper. |
| | 4th | 7.1 Electric horn and screen wiper. |
| | 5th | 7.2 Fuel gauge oil pressure gauge and water temperature gauge. |
| 13th | 1st | 7.2 Fuel gauge oil pressure gauge and water temperature gauge. |
| | 2nd | 7.2 Fuel gauge oil pressure gauge and water temperature gauge. |
| | 3rd | **8. Wiring system**<br>8.1 Types of wiring such as:Earth returns and insulated return system. |
| | 4th | 8.1 Types of wiring such as:Earth returns and insulated return system. |
| | 5th | 8.2 Wiring diagram of four wheelers and two wheelers. |
| 14th | 1st | 8.2 Wiring diagram of four wheelers and two wheelers. |
| | 2nd | 8.3 Elective wiring layout in a four wheeler. |
| | 3rd | 8.3 Elective wiring layout in a four wheeler. |
| | 4th | 8.3 Elective wiring layout in a four wheeler. |
| | 5th | 8.4 Inspection and maintenance of electrical systems. |
| 15th | 1st | 8.4 Inspection and maintenance of electrical systems. |
| | 2nd | **REVISION** |
| | 3rd | **REVISION** |
| | 4th | **REVISION** |
| | 5th | **REVISION** |

10/7/2025 Bejoy 10.07.25

Sign of Faculty

Sthilar 10/07/2025

Sign of H.O.D.