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

LESSON PLAN

SUBJECT: Th-3 (AUTOMOBILE ELECTRICITY)

Name Of The Faculty :- Er. Nihar Ranjan Sahoo & Er. Bijaya Kumar Behera
Branch :- Automobile Engineering **Semester :-** 5th
Session :- 2024-25 **Examination :-** 2024 (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	7
2	Starting System	6	7
3	Generating System	10	11
4	Alternator	5	5
5	Ignition System	15	17
6	Light	6	7
7	Accessories &Control	6	7
8	Wiring System	6	7
	Total Period:	60	68

29/06/2024
Sign of Faculty

29.06.24

29/06/24
Sign of H.O.D.

Discipline: AUTOMOBILE ENGINEERING	Semester: 5th	**Name of the Teaching Faculty:** Er. Nihar Ranjan Sahoo & Er. Bijaya Kumar Behera
		SESSION : 2024-25 **EXAMINATION :** 2024 (W)
Week	**Class Day**	**Topics to be Covered**
1st	1st	Introduction to Automobile Electricity.
	2nd	**1. Storage Battery** 1.1 Purpose and types of battery.
	3rd	1.1 Purpose and types of battery.
	4th	1.2 Construction capacity and charging of battery.
2nd	1st	1.2 Construction capacity and charging of battery.
	2nd	1.2 Construction capacity and charging of battery.
	3rd	1.3 Testing servicing and maintenance of battery.
	4th	1.3 Testing servicing and maintenance of battery.
3rd	1st	**2. Starting System** 2.1 Principle and construction of starter motor.
	2nd	2.1 Principle and construction of starter motor.
	3rd	2.2 Drive arrangement and control.
	4th	2.2 Drive arrangement and control.
4th	1st	2.3 Servicing and maintenance of starter motor.
	2nd	2.3 Servicing and maintenance of starter motor.
	3rd	2.3 Servicing and maintenance of starter motor.
	4th	**3. Generating system** 3.1 Flemings right hand rule and Lenz's law.
5th	1st	3.1 Flemings right hand rule and Lenz's law.
	2nd	3.2 Principle and constructional details of generator.
	3rd	3.2 Principle and constructional details of generator.
	4th	3.2 Principle and constructional details of generator.
6th	1st	3.2 Principle and constructional details of generator.
	2nd	3.3 Current and voltage regulator.
	3rd	3.3 Current and voltage regulator.
	4th	3.3 Current and voltage regulator.
7th	1st	3.4 Cut-out relay, routine maintenance of generator.

Week	Class Day	Topics to be Covered
7th	2nd	3.4 Cut-out relay, routine maintenance of generator.
	3rd	**4. Alternator** 4.1 Principle and construction of alternator.
	4th	4.1 Principle and construction of alternator.
8th	1st	4.2 Maximum R.M.S. and average value.
	2nd	4.2 Maximum R.M.S. and average value.
	3rd	4.3 Maintenance of alternator.
	4th	**5. Ignition System** 5.1 Principle and components (induction coil, contact breaker, spark plug, distributor and condenser) of spark ignition system.
9th	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	5.1 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.
10th	1st	5.1 Principle and components (induction coil, contact breaker, spark plug, distributor and condenser) of spark ignition system.
	2nd	5.2 Electronics spark timing computer controlled coil ignition system operation
	3rd	5.2 Electronics spark timing computer controlled coil ignition system operation
	4th	5.2 Electronics spark timing computer controlled coil ignition system operation
11th	1st	5.3 Electronics ignition system with distributor/distributer less.
	2nd	5.3 Electronics ignition system with distributor/distributer less.
	3rd	**INTERNAL ASSESMENT**
	4th	**INTERNAL ASSESMENT**
12th	1st	5.4 Types of ignition system such as:- Coil ignition system
	2nd	Magnet ignition system
	3rd	Electronics ignition system,
	4th	Transistorized ignition system.
13th	1st	5.5 Ignition system servicing and fault diagnosis.
	2nd	5.5 Ignition system servicing and fault diagnosis.
	3rd	**6. Light** 6.1 Setting of headlights.

Week	Class Day	Topics to be Covered
13th	4th	6.1 Setting of headlights.
14th	1st	6.2 Tail and stoplights.
	2nd	6.2 Tail and stoplights.
	3rd	6.2 Tail and stoplights.
	4th	6.3 Indicator and dim deeper mechanism.
15th	1st	6.3 Indicator and dim deeper mechanism.
	2nd	**7. Accessories & Control** 7.1 Electric horn and screen wiper.
	3rd	7.1 Electric horn and screen wiper.
	4th	7.1 Electric horn and screen wiper.
16th	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	7.2 Fuel gauge oil pressure gauge and water temperature gauge.
	4th	7.2 Fuel gauge oil pressure gauge and water temperature gauge.
17th	1st	**8. Wiring system** 8.1 Types of wiring such as:- Earth returns and insulated return system.
	2nd	8.1 Types of wiring such as:- Earth returns and insulated return system.
	3rd	8.2 Wiring diagram of four wheelers and two wheelers.
	4th	8.2 Wiring diagram of four wheelers and two wheelers.
18th	1st	8.3 Elective wiring layout in a four wheeler.
	2nd	8.3 Elective wiring layout in a four wheeler.
	3rd	8.4 Inspection and maintenance of electrical systems.
	4th	Revision.

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