BHADRAK ENGINEERING SCHOOL AND TECHNOLOGY, ASURALI, BHADRAK

AUTOMOBILE ENGG. & HYBRID VEHICLES (Th.-02)

CHAPTER-WISE DISTRIBUTION OF PERIODS

Sl. No.	Name of the Chapter	Periods as per Syllabus	Periods actually needed	Expected Marks
01	Introduction and Transmission system	12	14	15
02	Braking system	05	09	15
03	Ignition and Suspension system	10	09	10
04	Cooling and lubrication	08	05	20
05	Fuel and ignition system	10	07	20
06	Hybrid and Electric vehicles	15	16	20
	TOTAL	**60**	**60**	100

Sign of Lect. **Sign of HOD.** **Sign of AIC** **Sign of Vice Principal**

LESSON PLAN

Discipline: Mechanical Engg.	**Semester:** Sixth(6^{th})	**Name Of The Faculty:** Er Kishore Kumar Prusty
Subject: Automobile Engg,	**No of days/ week class allotted:** Six(6)	**Semester from date:** 14. 02.2023 **to Date:** 23. 05.2023 **No of weeks: 15**
WEEK	**CLASS DAY**	**THEORY TOPICS**
1^{st}	1^{st}	**Chapter-1(Introduction and Transmission System)** Introduction to the subject
	2^{nd}	Automobile- Definition, Need &Classify automobile
	3^{rd}	Layout of automobile chassis
	4^{th}	Explanation of the major components of automobile chassis &Line diagram
	5^{th}	Clutch System: Need, Types, Single plate clutch Working principle
	6^{th}	working principle of multiple plate clutch with neat sketch
2^{nd}	1^{st}	Gear Box, Purpose of gear box
	2^{nd}	Construction & working of a four-speed gear box
	3^{rd}	Concept of automatic gear changing mechanisms
	4^{th}	Cont..
	5^{th}	Propeller shaft & its function
	6^{th}	Constructional features of propeller shaft
3^{rd}	1^{st}	Differential Need, State types and its constructional features
	2^{nd}	Working Principle of differential
	3^{rd}	Review Class
	4^{th}	**Possible question answer discussion**
	5^{th}	**Chapter-2(Braking System)** Braking System in automobile & its need and type
	6^{th}	Mechanical Brake
4^{th}	1^{st}	Hydraulic brake
	2^{nd}	**Monthly test -01**
	3^{rd}	Air brake
	4^{th}	Air assisted hydraulic brake
	5^{th}	Conti……
	6^{th}	Vacuum Brake
5^{th}	1^{st}	Conti……
	2^{nd}	Review Class
	3^{rd}	**Possible question answer discussion**
	4^{th}	**Chapter-03 (Ignition and Suspension System)** Describe Battery ignition
	5^{th}	Describe Magnet ignition
	6^{th}	Cont.

6th	1st	Describe the construction of a sparkplug
	2nd	State purpose, construction and specification of a spark plug.
	3rd	State Common ignition trouble and its remedies
	4th	Description of the conventional suspension system for rear axle
	5th	Describe the conventional suspension system for front
	6th	Explain independent suspension system used in cars (coil spring and tension bars)
7th	1st	Explain the working of a telescopic shock absorber.
	2nd	Review Class
	3rd	**Possible question answer discussion**
	4th	**Chapter-4(Cooling and Lubrication)** Engine cooling.: Need and Classification
	5th	Describe defects of cooling and their remedial measures.
	6th	**Monthly test- 02**
8th	1st	Describe the Function of lubrication
	2nd	Cont.
	3rd	Describe the lubrication System of I.C. engine.
	4th	Review Class
	5th	**Possible question answer discussion**
	6th	**Chapter-5(Fuel System)** Describe Air fuel ratio
9th	1st	Describe carburetion process for petrol engine
	2nd	Describe Multipoint fuel injection system for petrol engine
	3rd	Describe the working principle of fuel injection system for multi cylinder engine.
	4th	Filter for diesel engine
	5th	Describe the working principle of fuel feed pump for diesel engine
	6th	Describe the working principle of injector for diesel engine
10th	1st	Review Class
	2nd	**Possible question answer discussion**
	3rd	**Chapter-06(Hybrid and Electric Vehicles)** Introduction, social and environment importance of hybrid and electric vehicles.
	4th	Social and environment importance of hybrid vehicles Social and environment importance of electric vehicles
	5th	Description of electric vehicles, operational advantages, present performance and application of electric vehicles
	6th	**Monthly test -03**
11th	1st	Operational advantages of electric vehicles
	2nd	Present performance and application of electric vehicles
	3rd	Battery for electric vehicles,
	4th	battery types and fuel cells
	5th	Hybrid vehicles, types of hybrid and electric vehicles,
	6th	Parallel, series configuration.
12th	1st	Series Parallel configuration.
	2nd	Drive train

	3rd	Cont.…
	4th	Solar powered vehicle.
	5th	Cont.…
	6th	Cont.
13th	1st	**Possible question answer discussion**
	2nd	Review Class
	3rd	**Monthly test -04**
	4th	Revision ch1
	5th	Revision ch1
	6th	Revision ch2
14th	1st	Revision ch2
	2nd	Revision ch2
	3rd	Revision ch3
	4th	Revision ch3
	5th	Revision ch3
	6th	Revision ch4
15th	1st	Revision ch 4
	2nd	Revision ch 5
	3rd	Revision ch 5
	4th	Previous year question answer discussion
	5th	Previous year question answer discussion
	6th	Previous year question answer discussion