

LESSON PLAN	
JHARSUGUDA ENGINEERING SCHOOL, JHARSUGUDA	
Name of the Faculty: RAKESH KUMAR MAHANTA	Academic Year: 2021-22
Course No.: Th.2	Course Name: AUTOMOBILE ENGINEERING AND HYBRID VEHICLES
Program: Diploma	Branch: MECHANICAL
Year / Sem : III/ VI	Section: M ₁

Sl. No.	Period /Class	Time (min)	Unit	Topic to be covered	Teaching method
1.	1	55	1	Automobiles definition, need & classification	Black board
2.	1	55x1	1	Layout of automobile chassis with major components (Line diagram)	Black board & smart class
3.	1	55x1	1	Manufacturer's specification of auto engines of motorcycle, scooter, car & bus one from each.	Black board
4.	2	55x2	1	State the classification of engines basing on working principle, fuel used position of cylinder, arrangement of cylinder.	Black board
5.	3	55x3	2	Clutch System: Need, Types (Single & Multiple) and Working principle with sketch	Black board & smart class
6.	2	55x2	2	Gear Box: Purpose of gear box, Construction and working of a 4 speed gear box, Concept of automatic gear changing mechanisms	Black board & smart class
7.	3	55x2	2	Propeller shaft: Constructional features	Black board
8.	3	55x3	2	Differential: Need, Types and Working principle	Black board & smart class
9.	1	55	3	Braking systems in automobiles: Need and types.	Black board
10.	2	55x2	3	Mechanical Brake	Black board
11.	2	55x2	3	Hydraulic brake	Black board
12.	1	55	3	Air brake	Black board
13.	1	55	3	Air assisted hydraulic brake	Black board
14.	1	55	4	Wiring diagram of Horn circuit	Black board
15.	1	55	4	Lighting circuit	Black board
16.	1	55	4	Cut-out circuit	Black board
17.	1	55	4	Voltage current regulator circuit and Flasher circuit (Sketch and description)	Black board
18.	2	55x2	4	State the common ignition troubles and its remedies.	Black board
19.	2	55x2	4	Spark plugs: Purpose, construction and specifications	Black board
20.	1	55	5	Description of the conventional suspension system for Rear and Front axle.	Black board & smart class
21.	1	55	5	Description of independent suspension system used in cars (coil spring and tension bars)	Black board & smart class

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22.	2	55x2	5	Constructional features and working of a telescopic shock absorber.	Black board & smart class
23.	1	55	5	Tyre specifications & causes and remedies of tyre wear.	Black board
24.	1	55	6	Describe necessity of engine cooling.	Black board
25.	2	55x2	6	Describe defects of cooling and their remedial measures	Black board
26.	2	55x2	6	Describe the Function of lubrication.	Black board
27.	2	55x2	6	Describe the lubrication System of I.C. engine.	Black board
28.	2	55x2	7	For petrol Engine: Description of carburetion and Air fuel ratio.	Black board & smart class
29.	3	55x3	7	Description of the Battery ignition and Magnet ignition system.(For petrol Engine)	Black board
30.	2	55	7	Multipoint fuel injection system.(For petrol Engine)	Black board & smart class
31.	3	55x3	7	For Diesel engine: Working principle of Fuel feed pump, Injector and Fuel filter.	Black board & smart class
32.	2	55x2	7	For Diesel engine: Working principle of fuel injection system for multi cylinder engine.	Black board & smart class
Total Period	60				

R. K. Sharma