

Name of the Faculty : Jai Parkash

Discipline Mechanical engineering

Semester 6th

Subject Automobile engineering

Lesson Plan duration : 15 weeks (from January , 2018 to April , 2018)

Work load (Lecture/ Practical) per week (in hours) : Lecture -03 practical-02

WEEK	THEORY		PRACTICAL	
	Lecture day	Topic (including assignment and test)	Practical Day	Topic
1	1	Automobile and its development	1	Fault and their remedies in (i) Battery Ignition system (ii) magnetic Ignition
	2	Various types of automobiles manufactured in India. Layout of chassis	2	Demonstration of (i) Head Light Model (ii) Wiper and Indicators
	3	Fuel systems for petrol	3	Demonstration of (i) AC Pump (ii) SU Pump (iii) Master Cylinders
2	4	diesel engines including multi point fuel injection (MPFI)	4	Demonstration of (i) rear axle (ii) differential (iii) steering system.
	5	Comparison of MPFI with carburetor system.	5	Fault finding practices on an automobile - four wheelers (petrol/ diesel)
	6	common rail direct injection (CRDI),	6	Tuning of an automobile engine
3	7	Fuel injectors Nozzles	7	Driving practice on a 4-wheeler.
	8	Clutch - Function, Constructional details of single plate	8	Charging of an automobile battery and measuring cell voltage and specific gravity of electrolyte.
	9	Multiplate friction clutches, Centrifugal and semi centrifugal clutch	9	Changing of wheels and inflation of tyres, balancing of wheels
4	10	Hydraulic clutch	10	Checking spark gap and valve clearance
	11	Gear Box - Function, Concept of sliding mesh	11	Cleaning and adjusting a carburetor.
	12	constant mesh gear box		
5	13	synchronesh gear box		
	14	Torque converter and overdrive		
	15	Types of drives – Front wheel		
6	16	Rear wheel, Four Wheel		
	17	Function of Propeller shaft, Universal joint		
	18	Differential and Different		
7	19	types of Rear axles Front Axles		
	20	Wheels and Tyres - Types of wheels,		
	21	Types and specifications of tyres		
8	22	used in Indian vehicles, Wheel balancing		
	23	Function and principle of Ackerman and Davis steering mechanism		
	24	types of steering gear boxes – Worm and nut		
9	25	worm and wheel, worm and roller, rack and opinion, Power steering system		
	26	alignment of wheels – Toe in, toe out, camber,		
	27	caster, kingpin inclination.		
10	28	Constructional details and working of mechanical		
	29	Constructional details and working of mechanical		
	30	brake adjustment		
11	31	Introduction to Anti lock brake system and its working.		
	32	Function, Types, Working of coil spring		
	33	leaf spring. Concept of Air suspension and Shock absorber.		
12	34	Constructional details of lead acid cell battery. Maintenance of batteries		
	35	checking of batteries for voltage and specific gravity		
	36	Magnato and Battery coil ignition system.		
13	37	Concept of Dynamo		
	38	Alternator - Construction and working, Charging of battery by Alternator		
	39	and Regulator.		
14	40	Revision		
	41			
15	42			

LESSON PLAN