Name of Faculty : Mr. Rajan Dabar
Discipline : Mechanical Engineering
Semester : VI
Subject : Automobile Engineering
Lesson Plan Duration : 15 Weeks (9 January onwards)

Week	Theory		Practical Day	
	Lecture Day	Topic (Including assignment/test)	Practical Day	Topic
I	1	Introduction to Automobile and its development , Defination	1	Fault and their remedies in Battery Ignition system .
	2	Various types of automobiles manufactured in India.		
	3	Layout of Different types of chassis in Automobile		
II	4	Introduction to power system, its requirements & Types	2	Fault and their remedies in magnetic Ignition system.
	5	Fuel systems for petrol and diesel engines		
	6	multi point fuel injection (MPFI)		
III	7	common rail direct injection (CRDI)	3	Demonstration of (i) Head Light Model (ii) Wiper and Indicators
	8	Fuel injectors and nozzles. Comparison of MPFI with carburetor system		
	9	Concept of double overhead cam, single overhead cam		
IV	10	Twin cam 16 valve technology in 4 cylinder engine	4	Demonstration of (i) AC Pump and (ii) SU Pump
	11	Function of Transmission System in a Automobile, variuos Types		
	12	Clutch - Function, Constructional details of single plate and multiplate friction clutches		
V	13	Centrifugal and semi centrifugal clutch, Hydraulic clutch	5	Demonstration of Master Cylinders
	14	Gear Box - Function, Concept of sliding mesh		
	15	Constant mesh		
VI	16	Synchromesh gear box	6	Demonstration of (i) rear axle and (ii) differential.
	17	Torque converter and overdrive,		
	18	Types of drives – Front wheel, Rear wheel, Four Wheel. Function of Propeller shaft,		
VII	19	Universal joint and Differential	7	Demonstration of steering

	20	Different types of Rear axles and Front Axles		system.
	21	Wheels and Tyres - Types of wheels, Types and specifications of tyres used in Indian vehicles		
VIII	22	Wheel balancing	8	Fault finding practices on an automobile - four wheelers (petrol/ diesel vehicles).
	23	Function and principle of Ackerman and Davis steering mechanism		
	24	types of steering gear boxes – Worm and nut		
IX	25	types of steering gear box worm and wheel, worm and roller	9	Tuning of an automobile engine
	26	types of steering gear box rack and opinion, Power steering system		
	27	alignment of wheels – Toe in, toe out, camber, caster, kingpin inclination.		
X	28	Checking of Class Work & Assignment-I	10	Driving practice on a 4-wheeler
	29	Constructional details and working of mechanical Brakes		
	30	Constructional details and working of Hydraulic Brakes		
XI	31	Concept of air and vacuum brake	11	Charging of an automobile battery and measuring cell voltage and specific gravity of electrolyte
	32	brake adjustment and maintanence		
	33	Introduction to Anti lock brake system its advantages and applications		
XII	34	Working and Constructional details of Anti lock brake system	12	Changing of wheels and inflation of tyres, balancing of wheels.
	35	Introduction to suspension system, functions and its types		
	36	Working of coil spring and leaf spring suspension system		
XIII	37	Concept of Air suspension	13	Checking spark gap and valve clearance
	38	Working of Shock absorber		
	39	Constructional details of lead acid cell battery		
XIV	40	Maintenance of batteries, checking of batteries for voltage and specific gravity	14	Cleaning and adjusting a carburetor
	41	Working & constructinal details of Magnato and Battery coil ignition system		
	42	Concept of Dynamo		
XV	43	Alternator - Construction and working	15	Viva-Voce
	44	Charging of battery by Alternator and		

		Regulator		
	45	Checking of Class Work & Assignments		