

# Lesson Plan

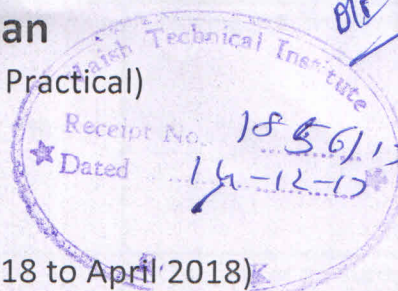
Name of the Faculty : Amit Kumar Gupta(Theory & Practical)

Discipline : Mechanical Engg.

Semester : 6th

Subject : Automobile Engineering

Lesson Plan Duration : 15 weeks(From January 2018 to April 2018)



*Dr. Anam*  
*[Signature]*

WEEK	Theory		Practical	
	Lecture day	Topic	Practical Day	Topic
1st	1st	Unit 1 : Introduction	1st	1.Fault and their remedies in (i) battery ignition system (ii) magnetic ignition system
	2nd	Automobile & its development		
	3rd	Various Types of automobile manufactured in india		
2nd	1st	Layout of Chasis	2nd	2.demonstration of (i)head light model(ii)wipers and indicators
	2nd	problem solving class		
	3rd	Unit 2: Power system-introduction		
3rd	1st	Fuel systems for petrol & diesel engines including MPFI ,CRDI	3rd	3.Demonstration of (i) AC pump (ii) SU pump (iii) master cylinders
	2nd	fuel injector and nozzles ,comparison of MPFI with carburettor system		
	3rd	concept of double overhead cam, single overhead cam, twin cam valve technology in 4 cylider engine		
4th	1st	problem solving class	4th	4. Demonstration of rear axle ,differential and steering system
	2nd	test and assignment		
	3rd	Unit 3: Transmission System- Introduction		
5th	1st	Clutch-function, constructional details of single plate & multiplate friction clutches	5th	5. Fault finding practices on an automobile four wheelers
	2nd	centrifugal and semi centrifugal clutch , hydraulic clutch		
	3rd	Gear box-function, concept of sliding mesh and constant mesh gear box		
6th	1st	synchronesh gear box, torque convertor and overdrive	6th	6.Tuning of an automobile engine
	2nd	types of drives-front,rear and four wheel function of propeller shaft , universal joint		
	3rd	differential and different types of rear axles and front axles		

7th	1st	wheels and tyres-types of wheels,types and specification of tyres used in indian vehicles,wheel balancing	7th	7. Driving practice on a four wheeler
	2nd	problem solving class		
	3rd	<b>Unit 4: Steering System</b> -introduction		
8th	1st	function and principle of ackerman and davis steering mechanism	8th	8. Charging of an automobile battery and measuring cell voltage & specific gravity of electrolyte.
	2nd	types of steering gear boxes-worm and nut,worm and wheel, worm and roller		
	3rd	rack and pinion , power steering system		
9th	1st	alignment of wheels-toe in, toe out, camber, caster and kingpin inclination	9th	9. changing of wheels and inflation of tyres, balancing of wheels.
	2nd	problem solving class		
	3rd	test and assignment		
10th	1st	<b>Unit 5 : Braking system</b> -introduction	10th	10. Checking spark gap & valve clearance
	2nd	constructional details and working of mechanical and hydraulic brake		
	3rd	concept of air and vacuum brake		
	1st	brake adjustment, antilock brake system and its working	11th	11. Cleaning and adjusting a carburettor
	2nd	problem solving class		
	3rd	<b>Unit 6 : Suspension system</b> -Introduction		
12th	1st	function and types	12th	1. Fault and their remedies in (i) battery ignition system (ii) magnetic ignition system
	2nd	working of coil and leaf spring		
	3rd	concept of air suspension and shock absorber		
13th	1st	problem solving class	13th	2. demonstration of (i) head light model(ii) wipers and indicators
	2nd	<b>Unit 7 : Auto electrical system</b> -introduction		
	3rd	constructional details of lead acid cell battery,maintenance of batteries		
14th	1st	checking of batteries for voltage and specific gravity, magneto and battery coil ignition system	14th	3. Demonstration of (i) AC pump (ii) SU pump (iii) master cylinders
	2nd	concept of dynamo		
	3rd	alternator -construction and working		
15th	1st	charging of battery by alternator and regulator	15th	4. Demonstration of rear axle ,differential and steering system
	2nd	problem solving class		
	3rd	test and assignment		