Name of Faculty : Mr. Rajan Dabar
Discipline : Mechanical Engineering
Semester : IV
Subject : I.C. Engines
Lesson Plan Duration : 15 Weeks (9 January onwards)

Week	Theory		Practical Day	
	Lecture Day	Topic (Including assignment/test)	Practical Day	Topic
I	1	Introduction I.C. Engines ,its Types & Classifications	1	Study of a two stroke engine using cut section model, note the function and Material of each part.
	2	Working principle of two stroke cycle.		
	3	Working principle of four stroke cycle.		
II	4	SI engines and CI Engines	2	Checking of practical copy/ viva/Revision.
	5	Working of Otto cycle, and Diesel cycle.		
	6	Worling Principle of Dual cycle.		
III	7	Location and functions of various parts of IC engines.	3	Study of a four stroke engine using cut section model. Note the function of each Part.
	8	Materials used for various parts of IC engines.		
	9	Concept of IC engine terms: bore, stroke, dead centre, crank throw, compression ratio, piston displacement, piston speed.		
IV	10	Concept of carburetion.	4	Checking of practical copy/ viva/Revision
	11	Air fuel ratio.		
	12	Simple carburetor and its application.		
V	13	MPFI, Common rail system.	5	Study of battery ignition system of a multi-cylinder petrol engine stressing ignition timings, setting, fixing order and contact breaker; gap adjustment.
	14	super charging and turbo charger.		
	15	SESSIONAL TEST -1/ ASSIGNMENT-1		
VI	16	SESSIONAL TEST-1 / ASSIGNMENT-1	6	Checking of practical copy/ viva/Revision
	17	Components of fuel system.		
	18	Description and working of fuel feed pump.		
VII	19	Fuel injection pump.	7	Study of cooling of IC engine.
	20	Various types of Injectors.		

	21	Description of battery coil ignition system.		
VIII	22	Magnet ignition system	8	Study of lubricating system of IC engine.
	23	Electronic ignition system.		
	24	Fault finding in ignition system.		
IX	25	remedial action for ignition system	9	Checking of practical copy/ viva/Revision
	26	SESSIONAL TEST -2/ ASSIGNMENT-2		
	27	SESSIONAL TEST -2/ ASSIGNMENT-2		
X	28	Function of cooling system in IC engine.	10	Determination of BHP by dynamometer.
	29	Air cooling and water cooling system.		
	30	use of thermostat and radiator.		
XI	31	forced circulation in water cooling (description with line diagram).	11	Checking of practical copy/ viva/Revision
	32	Function of lubrication.		
	33	Types and properties of lubricant.		
XII	34	Lubrication system of engine.	12	Morse test on multi-cylinder petrol engine.
	35	Fault finding in cooling and lubrication and remedial action.		
	36	Engine power - indicated and brake power.		
XIII	37	Efficiency - mechanical, thermal.	13	Checking of practical copy/ viva/Revision
	38	Efficiency - relative and volumetric.		
	39	Methods of finding indicated and brake power.		
XIV	40	Morse test for petro1 engine.	14	Local visit to roadways or private automobile workshops.
	41	Heat balance sheet.		
	42	Concept of pollutants in SI and CI engines, pollution control.		
XV	43	norms for two or four wheelers BIS – I, II, III and IV	15	Checking of practical copy/ viva/Revision.
	44	methods of reducing pollution in IC engines. alternative fuels like CNG and LPG.		
	45	SESSIONAL TEST -3 ASSIGNMENT-3		