

Name of the faculty

: RAJAN SARIN

Discipline

: Automobile Engg.

Semester

: II-th

Subject

: Auto, Engines -II-

Lesson plan duration

: July - Nov - 2018

Work load (Lectures/Prac)  
per week (In hours)

: 03 Hours (Lecture-)

Weeks	Theory		Prac Topic
	Lecture/ Day	Topic (Including assignment/test).	
I	1	Theory of Diesel engine operation.	N/A
	2	Difference between petrol and diesel engine.	
	3	Advantages - and disadvantages.	
II	4	Fuel filters (Primary and secondary)	
	5	Fuel injection pumps Plunger and barrel type	
	6	distributor type	
III	7	Priming of fuel feed pumps	
	8	Fuel injectors.	
	9	Solid injection.	
IV	10	CRDI	
	11	Types of nozzles	
	12	Governing and type of governors.	
V	13	Phenomenon of combustion in C.I. Engines & S.I. engines.	
	14	Phases of combustion, After burning.	
	15	Methods producing turbulence.	
VI	16	Combustion chambers diesel engine.	
	17	Combustion chambers diesel engine.	
	18	Combustion chambers petrol engine	

	19	Detonation and knocking
<u>VII</u>	20	Octane and cetane number.
	21	Super charged engines
<u>VIII</u>	22	Location of supercharger, Power absorbed by super charger
	23	Turbo charged engines
	24	Wankel engine
<u>IX</u>	25	wankel engine
	26	Gas turbine
	27	Jet propulsion
<u>X</u>	28	Alternate fuels operated engines LPG, CNG, Hydrogen
	29	Alternate fuels operated engines.
	30	Working principle of Hybrid car
<u>XI</u>	31	Fuel cell car / dual fuel operated engines.
	32	Effect on engine performance due to temperature,
	33	Due to pressure, comp. ratio, engine speed
<u>XII</u>	34	Due to working conditions, dirt, desert, hills
	35	Injection timing / spark timing.
	36	Due to air fuel ratio, Remedial measures
<u>XIII</u>	37	Two stroke engine scavenging
	38	Definition and types of scavenging.
	39	Revision
<u>XIV</u>	40	Sources of engine pollutants S.I. Engine and C.I. engine
	41	Effects of pollutants on human and environment.
	42	Crack case ventilation, fuel tank ventilation, carburation, recirculation.
<u>XV</u>	43	Redesigning of various engine system
	44	V.V.R exhaust gas recirculation systems
	45	Catalytic converters



46 Close loop feedback

XVI

47 Electronic integrated engine management systems

48 Emission rules and regulations

XVII

49 Bharat - I, II, III, IV.

50 Revision

51 Constructional features of engines used in automobiles.

XVIII

52 Hero, Honda

53 Maruti Suzuki, Tata Leyland

54. Volvo trucks.

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|--------------|----|---|
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