SPINTRONIC TECHNOLOGY AND ADVANCE RESEARCH

MECHANICAL ENGINEERING

SUBJECT-AUTOMOBILE ENGINEERING

LESSON PLAN SESSION 2025-26 (Summer -25) SEM-6TH

NAME OF FACULTY-Er. A.DAS(Asst. Prof.)

SL. NO.	NO OF PERIOD (TOPIC WISE)	TOTAL NO PERIOD	Cumulative no of periods
1	Definition, need and classification	1	1
2	Layout of automobile chassis with major components	1	2
3	Clutch System: Need, Types (Single & Multiple)	1	3
4	Working principle of clutch with sketch	1	4
5	Gear Box: Purpose of gear box	1	5
6	Concept of automatic gear changing mechanisms	1	6
7	Differential: Need, Types and Working principle	1	7
8	Propeller shaft: Constructional features	1	8
9	Differential: Need, Types	1	9
10	Working principle of differential	1	10
11	Braking systems in automobiles:	1	11
12	Need and types of braking system	1	12
13	Mechanical Brake construction	1	13
14	Mechanical Brake working	1	14
15	Hydraulic Brake construction	1	15
16	Hydraulic brake working	1	16
17	Air Brake construction	1	17
18	Air Brake working	1	18
19	Air assisted Hydraulic Brake construction	1	19
20	Air assisted Hydraulic Brake working	1	20
21	Vacuum Brake construction	1	21
22	Vacuum Brake working	1	22
23	Describe the Battery ignition	1	23
24	Magnet ignition system	1	24
25	Spark plugs: Purpose, construction	1	25
26	and specifications	1	26
27	State the common ignition troubles and its remedies	1	27
28	Description of the conventional suspension system for Rear axle	1	28
29	Description of the conventional suspension system for front axle	1	29
30	Description of independent suspension system used in cars	1	30
31	coil spring and tension bars	1	31
32	Constructional features and working of a telescopic shock absorber	1	32
33	Engine cooling: Need and classification	1	33
34	Describe defects of cooling	1	34
35	remedial measures of cooling	1	35
36	Describe the Function of lubrication	1	36
37	Describe the lubrication System of I.C. engine	1	37

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38	Describe Air fuel ratio Carburetion process for Petrol Engine	1	38
39	construction of Carburetion process for petrol engine	1	39
40	Working of carburetion process for petrol engine	1	40
41	Construction of Multipoint fuel injection system for Petrol Engine	1	41
42	Working of Multipoint fuel injection system for Petrol engine	1	42
43	Describe the construction of fuel injection system for multi cylinder Engine	1	43
44	Working of fuel injection system	1	44
45	Filter for Diesel engine	1	45
46	Describe the working principle of Fuel feed pump	1	46
47	Describe the working principle of fuel injector	1	47
48	Introduction, Social and Environmental	1	48
49	importance of Hybrid and Electric Vehicles	1	49
50	Description of Electric Vehicles	1	50
51	operational advantages, present performance and applications of Electric Vehicles	1	51
52	Battery for Electric Vehicles	1	52
53	Battery types and fuel cells	1	53
54	Hybrid vehicles, Types of Hybrid and Electric Vehicles	1	54
55	Parallel, Series, Parallel and Series configurations	1	55
56	Solar powered vehicles	1	56
57	Doubt clearing class	1	57
58	Assignment question	1	58
59	Question paper discussion	1	59
60	Question paper discussion	1	60

Reference Books . AUTOMOBILE ENGINEERING VOL-1 &2 Dr Kirpal Singh

AUTOMOBILE ENGINEERING BY R. B. GUPTA

AUTOMOBILE ENGINEERING BY C. P. NAKRA