

GANESHINSTITUTE OF ENGINEERING AND TECHNOLOGY, POLYTECHNIC BBSR.

DEPARTMENT OF MECHANICAL ENGINEERING

LESSON PLAN CUM PROGRESS REPORT

SUBJECT: AUTOMOBILE ENGINEERING & HYBRID VEHICLE (AE & HV)			SEMESTER: 6TH				BRANCH: MECHANICAL ENGINEERING		
LECTURE NO.	CO	BTL	TOPIC TO BE COVERED	BOOK NAME / CHAPT. NO. / PAGE NO.	WEB REFERENCE IF ANY	TEACHING LEARNING METHOD	PLAN DATE	ACTION DATE	REVIEW BY HOD
1	1	2	1. INTRODUCTION & TRANSMISSION SYSTEM: 1.1 Automobiles: Definition, need and classification	R.B. GUPTA /AUTOMOBILE ENGINEERING. / Page no.-1-1	https://youtu.be/wgnANmNkEYs	1-Introduction to EEM-5 min 2- Prerequisites for EEM- PPT/Smart board-10 min 3-Syllabus & CO discussion-10 min 4-Lecturer-35 min	05-01-2026		
2	1	2	Layout of automobile chassis with major components Automobiles: Definition, need and classification: Layout of automobile chassis with major components (Line diagram)	R.B. GUPTA /AUTOMOBILE ENGINEERING. / Page no.-35-1	https://youtu.be/yYxjGp8uAwY	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts & Assignment-10 min	06-01-2026		
3	1	2	2 Clutch System: Need, Types (Single & Multiple) and Working principle with sketch	R.B. GUPTA /AUTOMOBILE ENGINEERING. / Page no.-27-1,27-15	https://youtu.be/5LtYiYcORnl	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts & Assignment-10 min	07-01-2026		
4	1	2	2 Clutch System: Need, Types (Single & Multiple) and Working principle with sketch	R.B. GUPTA /AUTOMOBILE ENGINEERING. / Page no.-27-16	https://youtu.be/5LtYiYcORnl	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts & Assignment-10 min	08-01-2026		
5	1	2	1.0 1.3 Gear Box: Purpose of gear box, Construction and working of a 4 speed gear box	R.B. GUPTA /AUTOMOBILE ENGINEERING. / Page no.-28-1,28-2	https://youtu.be/bdH-W9LbYjs	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts & Assignment-10 min	19-01-2026		

6	1	2	1.3 Gear Box: Purpose of gear box, Construction and working of a 4 speed gear box	R.B. GUPTA /AUTOMOBILE ENGINEERING. / Page no.-28-11	https://youtu.be/bdH-W9LbYjs	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts & Assignment- 10 min	10-01- 2026		
7	1	2	1.4 Concept of automatic gear changing mechanisms	R.B. GUPTA /AUTOMOBILE ENGINEERING. / Page no.-29-1	https://youtu.be/u_y1S8C0Hmc	1-Previous class topic Review-5 min 2- PPT/Smart board-15 min 2-Lecturer-30 min 3-Doubts & Assignment- 10 min	12-01- 2026		
8	1	2	1.4 Concept of automatic gear changing mechanisms	R.B. GUPTA /AUTOMOBILE ENGINEERING. / Page no.-29-2	https://youtu.be/u_y1S8C0Hmc	1-Previous class topic Review-5 min 2- PPT/Smart board-15 min 3-Lecturer- 4-Doubts & Assignment- 10 min	13-01- 2026		
9	1	2	1.5 Propeller shaft: Constructional features	R.B. GUPTA /AUTOMOBILE ENGINEERING. / Page no.-30-1	https://youtu.be/AECKq CyfMQA	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts & Assignment- 10 min	15-01- 2026		
10	1	2	1.5 Propeller shaft: Constructional features	R.B. GUPTA /AUTOMOBILE ENGINEERING. / Page no.-30-2	https://youtu.be/AECKq CyfMQA	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts & Assignment- 10 min	16-01- 2026		
11	1	2	1.6 Differential: Need, Types and Working principle	R.B. GUPTA /AUTOMOBILE ENGINEERING. / Page no.-31-1	https://youtu.be/nC6fsNXdcMQ	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts & Assignment- 10 min	17-01- 2026		
12	1	2	1.6 Differential: Need, Types and Working principle	R.B. GUPTA /AUTOMOBILE ENGINEERING. / Page no.-31-2	https://youtu.be/nC6fsNXdcMQ	1-Previous class topic Review-5 min 2- PPT/Smart board-15 min 3-Lecturer-30 4-Doubts & Assignment- 10 min	19-01- 2026		
13	2	2	BRAKING SYSTEM: 2.1 Braking systems in automobiles: Need and types	R.B. GUPTA /AUTOMOBILE ENGINEERING. / Page no.-36-1	https://youtu.be/665YfCieiH8	1-Previous class topic Review-5 min 2-Lecturer-45 3-Doubts & Assignment- 10 min	20-01- 2026		
14	2	2	2.2 Mechanical Brake	R.B. GUPTA /AUTOMOBILE ENGINEERING. / Page no.-36-2	https://youtu.be/MoRrFK6Zzq8	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts & Assignment- 10 min	21-01- 2026		

15	2	2	2.3 Hydraulic Brake	R.B. GUPTA /AUTOMOBILE ENGINEERING. / Page no.-36-4	https://youtu.be/JbESrJ9YPQ0	1-Previous class topic Review-5 min 2- PPT/Smart board-15 min 3-Lecturer-4-Doubts & Assignment-10 min	22-01-2026		
16	2	2	2.4 Air Brake	R.B. GUPTA /AUTOMOBILE ENGINEERING. / Page no.-36-17	https://youtu.be/SodkOh7FRAME	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts & Assignment-10 min	24-01-2026		
17	2	2	2.5 Air 2.6 Vacuum Brake assisted Hydraulic Brake	R.B. GUPTA /AUTOMOBILE ENGINEERING. / Page no.-36-22	https://youtu.be/gk6JJStmb9c	1-Previous class topic Review-5 min 2- PPT/Smart board-15 min 2-Lecturer-30 min 3-Doubts & Assignment-10 min	27-01-2026		
18	2	2	IGNITION & SUSPENSION SYSTEM: 3.1 Describe the Battery ignition	R.B. GUPTA /AUTOMOBILE ENGINEERING. / Page no.-25-2	https://youtu.be/s_gl6ovMqIQ	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts & Assignment-10 min	28-01-2026		
19	2	2	IGNITION & SUSPENSION SYSTEM: 3.1 Describe the Magnet ignition system	R.B. GUPTA /AUTOMOBILE ENGINEERING. / Page no.-25-3	https://youtu.be/J24Z2Pn94cY	1-Previous class topic Review-5 min 2- PPT/Smart board-15 min 3-Lecturer-30 min 4-Doubts & Assignment-10 min	29-01-2026		
20	2	2	3.2 Spark plugs: Purpose, construction and specifications	R.B. GUPTA /AUTOMOBILE ENGINEERING. / Page no.-25-10	https://youtu.be/hAPqDPZ3dh8	1-Previous class topic Review-5 min 2- PPT/Smart board-15 min 3-Lecturer-4-Doubts & Assignment-10 min	30-01-2026		
21	2	2	3.3 State the common ignition troubles and its remedies	R.B. GUPTA /AUTOMOBILE ENGINEERING. / Page no.-25-10	https://youtu.be/XS_iutJqMw0	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts & Assignment-10 min	31-01-2026		
22	5	2	3.4 Description of the conventional suspension system for Rear and Front axle	R.B. GUPTA /AUTOMOBILE ENGINEERING. / Page no.-34-2	https://youtu.be/MP_rUWfopgA	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts & Assignment-10 min	02-02-2026		
23	5	2	3.4 Description of the conventional suspension system for Rear and Front axle	R.B. GUPTA /AUTOMOBILE ENGINEERING. / Page no.-34-3	https://youtu.be/MP_rUWfopgA	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts & Assignment-10 min	03-03-2026		

24	5	1	3.5 Description of independent suspension system used in cars (coil spring and tension bars)	R.B. GUPTA /AUTOMOBILE ENGINEERING. / Page no.-34-3	https://www.youtube.com/shorts/Qty3bWeKNdRU?feature=share	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts & Assignment-10 min	04-02-2026		
25			3.5 Description of independent suspension system used in cars (coil spring and tension bars)	R.B. GUPTA /AUTOMOBILE ENGINEERING. / Page no.-34-3	https://www.youtube.com/shorts/Qty3bWeKNdRU?feature=share	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts & Assignment-10 min	05-02-2026		
26	2	1	3.6 Constructional features and working of a telescopic shock absorber	R.B. GUPTA /AUTOMOBILE ENGINEERING. / Page no.-34-17	https://youtu.be/uxkmDvdCTy8	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts & Assignment-10 min	06-02-2026		
27	2	2	3.6 Constructional features and working of a telescopic shock absorber	R.B. GUPTA /AUTOMOBILE ENGINEERING. / Page no.-34-17	https://youtu.be/uxkmDvdCTy8	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts & Assignment-10 min	07-02-2026		
28	3	2	COOLING AND LUBRICATION: 4.1 Engine cooling: Need and classification	R.B. GUPTA /AUTOMOBILE ENGINEERING. / Page no-19-1	https://youtu.be/_4TQ0oQxe_g	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts & Assignment-10 min	08-02-2026		
29	3	2	COOLING AND LUBRICATION: 4.1 Engine cooling: Need and classification	R.B. GUPTA /AUTOMOBILE ENGINEERING. / Page no.-19-1	https://youtu.be/_4TQ0oQxe_g	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts & Assignment-10 min	09-02-2026		
LECTURE NO.	CO	BTL	TOPIC TO BE COVERED	BOOK NAME. /CHAPT. NO./PAGE NO	WEBREFERENCEIF ANY	TEACHING LEARNING METHOD	10-02-2026	ACTION DATE	REVIEW BY HOD
30	3	2	4.2 Describe defects of cooling and their remedial measures	R.B. GUPTA /AUTOMOBILE ENGINEERING. / Page no.-19-2	https://youtu.be/PIJxgfJD5w	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts & Assignment-10 min	11-02-2026		
31	3	2	4.2 Describe defects of cooling and their remedial measures	R.B. GUPTA /AUTOMOBILE ENGINEERING. / Page no.- 19-2	https://youtu.be/PIJxgfJD5w	1-Previous class topic Review-5 min 2- PPT/Smart board-15 min 3-Lecturer-4-Doubts & Assignment-10 min	12-02-2026		

32	3	2	4.3 Describe the Function of lubrication	R.B. GUPTA /AUTOMOBILE ENGINEERING. / Page no.-21-1	https://youtu.be/OiUQFjsM7Xs	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts & Assignment-10 min	13-02-2026		
33	3	2	4.3 Describe the Function of lubrication	R.B. GUPTA /AUTOMOBILE ENGINEERING. / Page no.-21-2	https://youtu.be/65xl7454_b8	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts & Assignment-10 min	14-02-2026		
34	3	2	4.4 Describe the lubrication System of I.C. engine	R.B. GUPTA /AUTOMOBILE ENGINEERING. / Page no.-21-9	https://youtu.be/wrLGxNwpbt8	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts & Assignment-10 min	16-02-2026		
35	3	2	4.4 Describe the lubrication System of I.C. engine	R.B. GUPTA /AUTOMOBILE ENGINEERING. / Page no.-21-9	https://youtu.be/wrLGxNwpbt8	1-Previous class topic Review-5 min 2-Lecturer-3-Doubts & Assignment-10 min	17-02-2026		
36	3	2	FUEL SYSTEM: 5.1 Describe Air fuel ratio.	R.B. GUPTA /AUTOMOBILE ENGINEERING. / Page no.-14-1	https://youtu.be/83csy0wXwnw	1-Previous class topic Review-5 min 2- PPT/Smart board-15 min 3-Lecturer-4-Doubts & Assignment-10 min	18-02-2026		
37	3	2	FUEL SYSTEM: 5.1 Describe Air fuel ratio	R.B. GUPTA /AUTOMOBILE ENGINEERING. / Page no.-14-1	https://youtu.be/83csy0wXwnw	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts & Assignment-10 min	19-02-2026		
38	3	2	5.2 Describe Carburetion process for Petrol Engine	R.B. GUPTA /AUTOMOBILE ENGINEERING. /14-3 Page no.-	https://youtu.be/uHITZqcT7EU	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts & Assignment-10 min	20-02-2026		
39	3	2	5.3 Describe Multipoint fuel injection system for Petrol Engine	R.B. GUPTA /AUTOMOBILE ENGINEERING. / Page no.-15=2	https://youtu.be/09O7YkPJyKg	1-Previous class topic Review-5 min 2- PPT/Smart board-15 min 2-Lecturer-30 min 3-Doubts & Assignment-10 min	21-02-2026		
40	3	2	5.3 Describe Multipoint fuel injection system for Petrol Engine	R.B. GUPTA /AUTOMOBILE ENGINEERING. / Page no.-15-2	https://youtu.be/09O7YkPJyKg	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts & Assignment-10 min	23-02-2026		

41	3	2	5.3 Describe Multipoint fuel injection system for Petrol Engine	R.B. GUPTA /AUTOMOBILE ENGINEERING. / Page no.-15-2	https://youtu.be/09O7YkPJyKg	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts & Assignment-10 min	24-02-2026		
42	3	2	5.4Describe the working principle of fuel injection system for multi cylinder Engine	R.B. GUPTA / AUTOMOBILE ENGINEERING. / Page no.-15-11	https://youtu.be/v2Y2IbMD9pc	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts & Assignment-10 min	25-02-2026		
43	3	2	5.4Describe the working principle of fuel injection system for multi cylinder Engine	R.B. GUPTA / AUTOMOBILE ENGINEERING. / Page no.-15-11	https://youtu.be/v2Y2IbMD9pc	1-Previous class topic Review-5 min 2-Lecturer-3-Doubts & Assignment-10 min	26-02-2026		
44	3	2	5.5Filter for Diesel engine	R.B. GUPTA / AUTOMOBILE ENGINEERING. / Page no.-15-7	https://youtu.be/79E9NNFXDCo	1-Previous class topic Review-5 min 2- PPT/Smart board-15 min 2-Lecturer-30 min 3-Doubts & Assignment-10 min	27-02-2026		
45	3	2	5.6 Describe the working principle of Fuel feed pump and Fuel Injector for Diesel engine	R.B. GUPTA / AUTOMOBILE ENGINEERING. / Page no.-15-20	https://youtu.be/v9cLmnkacNo	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts & Assignment-10 min	02-03-2026		
46	3	2	5.6 Describe the working principle of Fuel feed pump and Fuel Injector for Diesel engine	R.B. GUPTA / AUTOMOBILE ENGINEERING. / Page no.-15-20	https://youtu.be/v9cLmnkacNo	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts & Assignment-10 min	05-03-2026		
47	4	2	ELECTRIC AND HYBRID VEHICLES: 6.1 Introduction, Social and Environmental importance of Hybrid and Electric Vehicles	R.B. GUPTA /AUTOMOBILE ENGINEERING. / Page no.-	https://youtu.be/3emzFv7EBOY?list=PLSJZETVyEssniyF9TXc4uhcRaxOyKlmb9	1-Previous class topic Review-5 min 2- PPT/Smart board-15 min 2-Lecturer-30 min 3-Doubts & Assignment-10 min	06-03-2026		
48	4	2	ELECTRIC AND HYBRID VEHICLES: 6.1 Introduction, Social and Environmental importance of Hybrid and Electric Vehicles	R.B. GUPTA /AUTOMOBILE ENGINEERING. / Page no.-	https://youtu.be/3emzFv7EBOY?list=PLSJZETVyEssniyF9TXc4uhcRaxOyKlmb9	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts & Assignment-10 min	07-03-2026		
49	4	2	6.2 Description of Electric Vehicles, operational advantages, present performance and applications of Electric Vehicles	R.B. GUPTA /AUTOMOBILE ENGINEERING. / Page no.-	https://youtu.be/XkuVUnscajw	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts & Assignment-10 min	09-03-2026		

50	4	2	6.2 Description of Electric Vehicles, operational advantages, present performance and applications of Electric Vehicles	R.B. GUPTA /AUTOMOBILE ENGINEERING. / Page no.-	https://youtu.be/XkuVUnscajw	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts & Assignment-10 min	10-03-2026		
51	4	2	6.2 Description of Electric Vehicles, operational advantages, present performance and applications of Electric Vehicles	R.B. GUPTA /AUTOMOBILE ENGINEERING. / Page no.-	https://youtu.be/XkuVUnscajw	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts & Assignment-10 min	11-03-2026		
52	4		6.2 Description of Electric Vehicles, operational advantages, present performance and applications of Electric Vehicles	R.B. GUPTA /AUTOMOBILE ENGINEERING. / Page no.-	https://youtu.be/XkuVUnscajw	1-Previous class topic Review-5 min 2- PPT/Smart board-15 min 2-Lecturer-30 min 3-Doubts & Assignment-10 min	12-03-2026		
53	4	2	6.3 Battery for Electric Vehicles, Battery types and fuel cells	R.B. GUPTA /AUTOMOBILE ENGINEERING. / Page no.-	https://youtu.be/Aa647ghOjGw	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts & Assignment-10 min	13-03-2026		
54	4	2	6.3 Battery for Electric Vehicles, Battery types and fuel cells	R.B. GUPTA /AUTOMOBILE ENGINEERING. / Page no.-	https://youtu.be/Aa647ghOjGw	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts & Assignment-10 min	14-03-2026		
55	5	2	6.4 Hybrid vehicles, Types of Hybrid and Electric Vehicles: Parallel, Series, Parallel and Series configurations	R.B. GUPTA /AUTOMOBILE ENGINEERING. / Page no.-	https://youtu.be/47U1g4ChVkM	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts & Assignment-10 min	16-03-2026		
56	5	2	6.4 Hybrid vehicles, Types of Hybrid and Electric Vehicles: Parallel, Series, Parallel and Series configurations	R.B. GUPTA /AUTOMOBILE ENGINEERING. / Page no.-	https://youtu.be/47U1g4ChVkM	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts & Assignment-10 min	17-03-2026		
57	5	2	6.5 Drive train	R.B. GUPTA /AUTOMOBILE ENGINEERING. / Page no.-	https://youtu.be/k1jHnUrNuLY	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts & Assignment-10 min	18-03-2026		
58	5	2	6.5 Drive train	R.B. GUPTA /AUTOMOBILE ENGINEERING. / Page no.-	https://youtu.be/k1jHnUrNuLY	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts & Assignment-10 min	19-03-2026		

59	5	2	6.6 Solar powered vehicles	R.B. GUPTA /AUTOMOBILE ENGINEERING. / Page no.-	https://youtu.be/KrQdE4jUPcw	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts & Assignment-10 min	20-03-2026		
60	5	2	6.6 Solar powered vehicles	R.B. GUPTA /AUTOMOBILE ENGINEERING. / Page no.-	https://youtu.be/KrQdE4jUPcw	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts & Assignment-10 min	05-01-2026		

Principal

Faculty

HOD, Mechanical Engineering