

GANESH INSTITUTE OF ENGINEERING AND TECHNOLOGY, POLYTECHNIC

DEPARTMENT OF MECHANICAL ENGINEERING

Er. Abhijit Dash

LESSON PLAN CUM PROGRESS REPORT

SUBJECT-power station engineering			SEMESTER:6TH			BRANCH:MECHANICAL ENGINEERING			
LECTURE NO.	CO	BTL	TOPIC TO BE COVERED	BOOK NAME./CHAPT. NO./PAGE NO.	WEBREFERENCE IF ANY	TEACHING LEARNING METHOD	PLAN DATE	ACTION DATE	REVIEW BY HOD
1	1	2	INTRODUCTION:	R.J RAJPUT PAGE NO-1	https://youtu.be/WR1vDFLqdc?si=dX0vdbRI1g7KYYz6	1-Introduction to P.S.E-5 min 2-Prerequisites for P.S.E -PPT/Smart board-10 min 3-Syllabus & CO discussion-10 min 4-Lecturer-35 min	22-12-2025		
2	1	2	Describe sources of energy	R.J RAJPUT PAGE NO-2	https://youtu.be/WR1vDFLqdc?si=dX0vdbRI1g7KYYz6	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts	23-12-2025		
3	1	2	Explain concept of Central and Captive power station	R.J RAJPUT PAGE NO-2	https://youtu.be/WR1vDFLqdc?si=dX0vdbRI1g7KYYz6	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts	24-12-2025		
4	1	3	Explain concept of Central and Captive power station	R.J RAJPUT PAGE NO-11	https://youtu.be/WR1vDFLqdc?si=dX0vdbRI1g7KYYz6	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts	29-12-2025		
5	3	3	Classify power plants.	R.J RAJPUT PAGE NO-30	https://youtu.be/OTVpsmjVJ8Q?si=RkSwyxKAgZG7p17Z	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts	30-12-2025		
6	1	2	Classify power plants.	R.J RAJPUT PAGE NO-30	https://youtu.be/7EONBWSduEc?si=w_dTmoGzUcmBeWqw	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts	31-12-2025		
7	1	2	Importance of electrical power in day today life.	R.J RAJPUT PAGE NO-30	https://youtu.be/1coMrjMW4l?si=1QO93Pc06bO81ftt	1-Previous class topic Review-5 min 2- PPT/Smart board-15 min 2-Lecturer-30 min 3-Doubts	05-01-2026		
8	2	2	Importance of electrical power in day today life.	R.J RAJPUT PAGE NO-30	https://youtu.be/DkUfzDkqC9l?si=ODb5QCaSG52Ay3D7	1-Previous class topic Review-5 min 2- PPT/Smart board-15 min 3-Lecturer-4-Doubts	06-01-2026		
9	2	2	Overview of method of electrical power generation	R.J RAJPUT PAGE NO-30	https://youtu.be/e294fJK5MIM?si=SngoW-EHcrkdMCd9	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts	07-01-2026		
10	2	2	Overview of method of electrical power generation	R.J RAJPUT PAGE NO-32	https://youtu.be/gAGeZS-Ngk4?si=K_B9zZSC2_aGR4Ua	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts	08-01-2026		

11	2	3	THERMAL POWER STATIONS: Layout of steam power stations.	R.J RAJPUT PAGE NO-35	https://youtu.be/0nuORb8ZeGE?si=8eyCnNAV7dXFUxqv	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts	12-01-2026		
12	2	3	Layout of steam power stations.	R.J RAJPUT PAGE NO-96	https://youtu.be/pXq88RXa6eA?si=fs-hq8j2XINmlqf	1-Previous class topic Review-5 min 2-Smart board-15 min 3-Lecturer-30 4-Doubts	13-01-2026		
13	2	2	Layout of steam power stations.	R.J RAJPUT PAGE NO-177	https://youtu.be/cinr2m87s_l?si=QAwd5H-YplJO-yIv	1-Previous class topic Review-5 min 2-Lecturer-45 3-Doubts	15-01-2026		
14	2	3	Steam power cycle. Explain Carnot vapour power cycle with P-V, T-s diagram and determine thermal efficiency.	R.J RAJPUT PAGE NO-143	https://youtu.be/wvEAsu7McOA?si=mHCe2rEkakSLoZxJ	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts	19-01-2026		
15	2	3	Steam power cycle. Explain Carnot vapour power cycle with P-V, T-s diagram and determine thermal efficiency.	R.J RAJPUT PAGE NO-149	https://youtu.be/zafhH18GOGs?si=lvwlc6uNGV36C2mp	1-Previous class topic Review-5 min 2- PPT/Smart board-15 min 3-Lecturer-4-Doubts & Assignment-10 min	20-01-2026		
16	2	3	Steam power cycle. Explain Carnot vapour power cycle with P-V, T-s diagram and determine thermal efficiency	R.J RAJPUT PAGE NO-211	https://youtu.be/rABS0TwbEkA?si=sPEoMk4n9aWxYoT7	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts	21-01-2026		
17	2	3	Steam power cycle. Explain Carnot vapour power cycle with P-V, T-s diagram and determine thermal efficiency	R.J RAJPUT PAGE NO-257	https://youtu.be/z-UBOKKUs-g?si=QJLs_RG41_Twoc5s	1-Previous class topic Review-5 min 2- PPT/Smart board-15 min 2-Lecturer-30 min 3-Doubts	22-01-2026		
18	2	2	Explain Rankine cycle with P-V, T-S & H-s diagram and determine thermal efficiency, Work done, work ratio, and specific steam Consumption.	R.J RAJPUT PAGE NO-269	https://youtu.be/1hGSNs_IvPE?si=FLiBd1wemXSmf1-P	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts & Assignment-10 min	27-01-2026		
19	2	2	Explain Rankine cycle with P-V, T-S & H-s diagram and determine thermal efficiency, Work done, work ratio, and specific steam Consumption.	R.J RAJPUT PAGE NO-94	https://youtu.be/z-Teb0ITsAA?si=fHk_j8JwTC-GZaxw	1-Previous class topic Review-5 min 2- PPT/Smart board-15 min 3-Lecturer-30 min 4-Doubts	28-01-2026		
20	2	2	Explain Rankine cycle with P-V, T-S & H-s diagram and determine thermal efficiency, Work done, work ratio, and specific steam Consumption.	R.J RAJPUT PAGE NO-640	https://youtu.be/Jbw-nMuMpEE?si=g_b0A2FYZ7O5gOI7	1-Previous class topic Review-5 min 2- PPT/Smart board-15 min 3-Lecturer-4-Doubts	29-01-2026		
21	2	2	Explain Rankine cycle with P-V, T-S & H-s diagram and determine thermal efficiency, Work done, work ratio, and specific steam Consumption.	R.J RAJPUT PAGE NO-650	https://youtu.be/hgjTt0mwvJA?si=6T5ofpi7_LdRjF-A	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts	02-02-2026		
22	2	2	Solve Simple Problems.	R.J RAJPUT PAGE NO-654	https://youtu.be/3nvkHjn1ETU?si=eXxD9bVFM9zjHQV	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts	03-02-2026		
23	3	4	Solve Simple Problems.	R.J RAJPUT PAGE NO-658	https://youtu.be/Jbw-nMuMpEE?si=oUdjUE7txNiMQpCi	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubt	04-02-2026		

24	3	4	List of thermal power stations in the state with their capacities.	R.J RAJPUT PAGE NO-664	https://youtu.be/k2rYDwcB4SA?si=cKJ3p34RhVm-Vtkv	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubt	05-02-2026		
25	3	4	List of thermal power stations in the state with their capacities.	R.J RAJPUT PAGE NO-	https://youtu.be/BSXeriyTfA0?si=jbi9yWodov-9PTwp	1-Previous class topic Review-5 min 2-Lecturer- 3-Doubt	09-02-2026		
26	3	5	List of thermal power stations in the state with their capacities.	R.J RAJPUT PAGE NO-	https://youtu.be/FCu1kLQHW7c?si=YxLa9Ad-dlhQvMGq	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts & Assignment-10 min	10-02-2026		
27	3	5	Boiler Accessories: Operation of Air pre heater, Operation of Economiser, Operation of Electrostatic precipitator and Operation of super heater. Need of boiler mountings and operation of boiler	R.J RAJPUT PAGE NO-678	https://youtu.be/yaFtI2_3B6E?si=XaVz7OL6n6FnQfwK	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubt	11-02-2026		
28	3	5	Operation of Electrostatic precipitator and Operation of super heater. Need of boiler mountings and operation of boiler	R.J RAJPUT PAGE NO-685	https://youtu.be/IOXpxG86RTE?si=4T0qOyqxKIZHpc88	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubt	12-02-2026		
29	3	5	precipitator and Operation of super heater. Need of boiler mountings and operation of boiler	R.J RAJPUT PAGE NO-349	https://youtu.be/r2sxZrmvO1o?si=w-UBMPrgazlcUUbw	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts	16-02-2026		
30	3	5	Draught systems (Natural draught, Forced draught & balanced draught) with their advantages & disadvantages	R.J RAJPUT PAGE NO-349	https://youtu.be/jq1EnfZvY0k?si=cMNsSkVOBKDOODbU	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts	17-02-2026		
31	3	5	Advantages & disadvantages of Draught system	R.J RAJPUT PAGE NO-359	https://youtu.be/QDP2PCo0jMM?si=o78zI2ONUXN-fDuE	1-Previous class topic Review-5 min 2- PPT/Smart board-15 min 3-Lecturer- 4-Doubts	18-02-2026		
32	3	5	Draught systems (Natural draught, Forced draught & balanced draught) with their advantages & disadvantages	R.J RAJPUT PAGE NO-350	https://youtu.be/bvNQP95j1XA?si=ad8_X3_Ga8eS7Nqw	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts	19-02-2026		
33	3	5	Steam prime movers: Advantages & disadvantages of steam turbine, Elements of steam turbine, governing of steam turbine. Performance of steam turbine: Explain Thermal efficiency, Stage efficiency and Gross efficiency.	R.J RAJPUT PAGE NO-	https://youtu.be/dw6nFbGiTcA?si=Du1Flca2dx2vn6GY	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts	23-02-2026		
34	3	5	Steam prime movers: Advantages & disadvantages of steam turbine, Elements of steam turbine, governing of steam turbine. Performance of steam turbine: Explain Thermal efficiency, Stage efficiency and Gross efficiency.	R.J RAJPUT PAGE NO-524	https://youtu.be/q8HmRLCgDAI?si=mW9LM21n7Kk8LtoC	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts	24-02-2026		

35	4	2	Steam prime movers: Advantages & disadvantages of steam turbine, Elements of steam turbine, governing of steam turbine. Performance of steam turbine: Explain Thermal efficiency, Stage efficiency and Gross efficiency.	R.J RAJPUT PAGE NO-525	https://youtu.be/tmLHu3RaxwY?si=wMQRs0acexamDgdl	1-Previous class topic Review-5 min 2-Lecturer- 3-Doubts	25-02- 2026		
36	4	2	Steam condenser: Function of condenser, Classification of condenser. function of condenser auxiliaries such as hot well, condenser extraction pump, air extraction pump, and circulating pump.	R.J RAJPUT PAGE NO-543	https://youtu.be/H9Pxp_L39jQ?si=NYlorDFxIPQfHUQ3	1-Previous class topic Review-5 min 2- Smart board-15 min 3-Lecturer- 4-Doubts	26-02- 2026		
37	4	5	Steam condenser: Function of condenser, Classification of condenser. function of condenser auxiliaries such as hot well, condenser extraction pump, air extraction pump, and circulating pump.	R.J RAJPUT PAGE NO-526	https://youtu.be/jUkLvhVUBpE?si=SQhhQJ0b-U3zzFIF	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubt	02-03- 2026		
38	4	5	Steam condenser: Function of condenser, Classification of condenser. function of condenser auxiliaries such as hot well, condenser extraction pump, air extraction pump, and circulating pump.	R.J RAJPUT PAGE NO-585	https://youtu.be/NAUR2jvcIWA?si=mbb4Aj8FMRBulw2_	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts	03-03- 2026		
39	4	5	Cooling Tower: Function and types of cooling tower, and spray ponds	R.J RAJPUT PAGE NO-547	https://youtu.be/gOgKaCBIwX0?si=iUsY_b4Us2VjcT8V	1-Previous class topic Review-5 min 2- PPT/Smart board-15 min 3-Lecturer-30 min 4-Doubts & Assignment-10 min	05-03- 2026		
40	4	2	Selection of site for thermal power stations.	R.J RAJPUT PAGE NO-54	https://www.youtube.com/live/gJlg3C_zRUU?si=D3Xf_AvH8PiRoYa5	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts & Assignment-10 min	09-03- 2026		
41	4	5	Selection of site for thermal power stations.	R.J RAJPUT PAGE NO-426	https://youtu.be/3K1mxS6M7wk?si=klb-G-0AmPSxCjmV	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts	10-03- 2026		
43	4	5	NUCLEAR POWER STATIONS: Classify nuclear fuel (Fissile & fertile material)	R.J RAJPUT PAGE NO-428	https://youtu.be/ohJBGk6P7XY?si=7Li2WHD5GzG02wEi	1-Previous class topic Review-5 min 2-Lecturer- 3-Doubts	11-03- 2026		
44	4	2	Explain fusion and fission reaction. Explain working of nuclear power plants with block diagram .	R.J RAJPUT PAGE NO-448	https://youtu.be/s-ervsxtQs?si=bE91O16AXcWJ9nvF	1-Previous class topic Review-5 min 2-/Smart board-15 min 2-Lecturer-30 min 3-Doubts	12-03- 2026		
45	4	2	Explain the working and construction of nuclear reactor . Compare the nuclear and thermal plants.	R.J RAJPUT PAGE NO-456	https://youtu.be/usnnKAOvNmM?si=d0EEeQS5EZwuWW-N	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts & Assignment-10 min	16-03- 2026		
46	4	4	Explain the disposal of nuclear waste. Selection of site for nuclear power stations. List of nuclear power stations.	R.J RAJPUT PAGE NO-431	https://youtu.be/cTJqiuK3-e4?si=xBKqKb8_ir7QG7ET	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts	17-03- 2026		

47	4	5	Explain the disposal of nuclear waste. Selection of site for nuclear power stations. List of nuclear power stations.	R.J RAJPUT PAGE NO-431	https://youtu.be/s-ervsxhtQs?si=bE910i6AXcWJ9nvF	1-Previous class topic Review-5 min 2- PPT/Smart board-15 min 2-Lecturer-30 min 3-Doubts & Assignment-10 min	18-03-2026		
48	4	5	DIESEL ELECTRIC POWER STATIONS: State the advantages and disadvantages of diesel electric power stations.	R.J RAJPUT PAGE NO- 349	https://youtu.be/H9Pxp_L39jQ?si=NYlorDFxlPQfHUQ3	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts	18-03-2026		
49	4	2	Explain briefly different systems of diesel electric power stations: Fuel storage and fuel supply system, Fuel injection system, Air supply system, Exhaust system, cooling system, Lubrication system, starting system, governing system.	R.J RAJPUT PAGE NO-354	https://youtu.be/jjUkLvhVUBpE?si=SQhhQJ0b-U3zzFIF	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts	19-03-2026		
50	4	2	Explain briefly different systems of diesel electric power stations: Fuel storage and fuel supply system, Fuel injection system, Air supply system, Exhaust system, cooling system, Lubrication system, starting	R.J RAJPUT PAGE NO-359	https://youtu.be/NAUR2jvcIWA?si=mbb4Aj8FMRBulw2_	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts	23-03-2026		
51	4	5	Selection of site for diesel electric power stations. Performance and thermal efficiency of diesel electric power stations.	R.J RAJPUT PAGE NO-350	https://youtu.be/gOgKaCBIwX0?si=iUsY_b4Us2VjcT8V	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts	24-03-2026		
52	4	5	5.0 HYDEL POWER STATIONS: State advantages and disadvantages of hydroelectric power plant. Classify and explain the general arrangement of storage type hydroelectric project and explain	R.J RAJPUT PAGE NO-525	https://www.youtube.com/live/gJlg3C_zRUU?si=D3Xf_AvH8PiRoYa5	1-Previous class topic Review-5 min 2- PPT/Smart board-15 min 2-Lecturer-30 min 3-Doubts & Assignment-10 min	25-03-2026		
53	4	5	HYDEL POWER STATIONS: State advantages and disadvantages of hydroelectric power plant.	R.J RAJPUT PAGE NO-525	https://youtu.be/BSXeriyTfA0?si=jbi9yWodov-9PTwp	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts &	26-03-2026		
54	4	5	Classify and explain the general arrangement of storage type hydroelectric project and explain its operation. Selection of site of hydel power plant	R.J RAJPUT PAGE NO-546	https://youtu.be/FCu1kLQHW7c?si=YxLa9Ad-dlhQvMGq	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts &	31-03-2026		
55	5	2	List of hydro power stations with their capacities and number of units in the state. Types of turbines and generation used. Simple problems.	R.J RAJPUT PAGE NO-548	https://youtu.be/zafhH18GOGs?si=lvwlc6uNGV36C2mp	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts & Assignment-10 min	02-04-2026		
56	5	1	GAS TURBINE POWER STATIONS Selection of site for gas turbine stations.	R.J RAJPUT PAGE NO- 428	https://youtu.be/rABS0TwbEkA?si=sPEoMk4n9aWxYoT7	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts & Assignment-10 min	06-04-2026		
57	5	2	GAS TURBINE POWER STATIONS Selection of site for gas turbine stations	R.J RAJPUT PAGE NO-428	https://youtu.be/z-UBOKKUs-g?si=QJLs_RG41_Twoc5s	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts &	07-04-2026		

58	5	4	Fuels for gas turbine . Elements of simple gas turbine power plants .Merits, demerits and application of gas turbine power plants.	R.J RAJPUT PAGE NO-433	https://youtu.be/1hGSNs_IvPE?si=FLiBd1wemXSmf1-P	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts &	08-04-2026		
59	5	4	Elements of simple gas turbine power plants 6.4 Merits, demerits and application of gas turbine power plants.	R.J RAJPUT PAGE NO-434	https://youtu.be/z-Teb0ITsAA?si=fHk_j8JwTC-GZaxw	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts & Assignment-10 min	09-04-2026		
60	5	5	Merits, demerits and application of gas turbine power plants.	R.J RAJPUT PAGE NO-431	https://youtu.be/jq1EnfZvY0k?si=cMNsSkVOBKDOODbU	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts & Assignment-10 min	15-04-2025		
61	5	5	Merits, demerits and application of gas turbine power plants.	R.J RAJPUT PAGE NO-431	https://youtu.be/QDP2PCo0jMM?si=o78zl2ONUXN-fDuE	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts & Assianment-10 min	16-04-2026		

Principal

Faculty

HoD, Mechanical Engineering