

LESSON PLAN

Degree/Diploma/+2 Science
(Theory/Pract/Lab/Workshop)

Semester 4th Branch Electrical Engg

Month & Date	Course No. & Title	Brief note of the topics to be covered	No. of Classes Required
13.2.2023	TH-1 EC-1	<u>DC Generators</u> Operating principle of generator. Const- ructional details of DC machines.	1
14.2	"	Different types of DC m/cs (shunt, series & compound) EMF equation	1
16.2	"	Solution to problems. Losses & efficiency of DC generators.	1
17.2	"	Condition of maximum efficiency Solved problems.	1
20.2	"	Armature reaction.	1
21.2	"	Methods of compensating commutating interpoles and compensating windings	1
23.2	"	Characteristics of DC generators.	1
24.2	"	Application of different types of DC generators.	1
25.2	"	Critical resistance and critical speed of DC shunt generator.	1
27.2	"	Solution to problems.	1
28.2	"	Condition of building-up of emf of DC generator.	1
2.3.23	"	Parallel operation of DC generators.	1
3.3	"	Solution to problems.	1
4.3	"	Doubt clear class.	1
6.3	"	<u>DC machines</u> Working principle, significance of back emf in DC motor.	1

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13.2.2023	TH-1 EC-1	34	<u>DC Generators</u> operating principle, Const- ructional details of DC generator.		
14.2	"	34	Shunt series and compound generators. EMF equation.		
16.2	"	34	Efficiency, solution to problems, losses		
17.2	"	34	Condition for maximum efficiency. Solution to problems.		
20.2	"	34	Armature reaction.		
21.2	"	34	Methods of compensating commutation. Interpoles and compensating windings		
23.2	"	34	Different characteristics		
24.2	"	34	Applications of DC generators.		
25.2	"	34	Critical resistance and critical speed of DC shunt generator.		
27.2	"	34	Solution to problems		
28.2	"	34	Condition of building up of emf of DC generator		
2.3.23	"	34	Parallel operation of DC generators.		
3.3	"	34	Solution to problems		
4.3	"	34	Doubt clear classes.		
6.3	"	34	<u>DC machines</u> working principle, significance of back emf in DC motor		

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7.3.2023	TH-1 EC-1	Voltage equation, Solution to problems.	1
9.3	"	Condition of maximum power output.	1
10.3	"	Torque equation Solution to problems.	1
11.3	"	characteristics of shunt, series and compound motors and their application.	1
13.3	"	Methods of starting of shunt, series and compound dc motors.	1
14.3	"	Speed control of DC shunt motor by flux control method of armature voltage control method.	1
16.3	"	Solution to problems.	1
17.3	"	Determination of efficiency by brake test method.	1
18.3	"	Solution to problems.	1
20.3	"	Determination of efficiency by brake test method.	1
21.3	"	Solution to problems.	1
23.3	"	Determination of efficiency by Swinburn's test method.	1
24.3	"	Losses, efficiency and power stages.	1
25.3	"	Uses of DC motors. Solution to problems.	1
27.3	"	Single phase transformer working principle, construction.	1

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7.3.2023	TH-1 EC-1	26	Voltage equation. Solution to problems.		
9.3	"	26	Condition of maximum power O/P.		
10.3	"	24	Torque equation Solution to problems.		
11.3	"	23	shunt, series and compound motor characteristics and their application.		
13.3	"	18	Methods of starting of shunt, series and compound dc motors.		
14.3	"	33	Speed control of DC shunt motor by flux control method and armature voltage control method.		
16.3	"	33	Solution to problems.		
17.3	"	32	Determination of efficiency by brake test method.		
18.3	"	28	Solution to problems.		
20.3	"	30	Determination of efficiency by brake test method.		
21.3	"	29	Solution to problems.		
23.3	"	29	Determination of efficiency by Swinburn's test method.		
24.3	"	30	Losses efficiency and power stages.		
25.3	"	32	Uses of DC motors. Solution to problems.		
27.3	"	32	Single phase transformer working principle, construction.		

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28.3.2023	TH-1 EC-1	core & shell type transformer.	1
31.3.2023	"	Transformer accessories such as conservator, tank, breather, explosion vent.	1
3.4	"	Cooling methods, core and maintenance.	1
4.4	"	EMF equation, ideal transformer.	1
6.4	"	Solution to problems voltage transformation ratio.	1
8.4	"	Transformers at no-load	1
10.4	"	Phasor diagram of a loaded transformer.	1
11.4	"	Equivalent resistance, leakage reactance and impedance.	1
13.4	"	Phasor diagram with winding resistance and magnetic leakage with L.P.F, leading P.F and lagging P.F.	1
15.4	"	Equivalent circuit and related problems.	1
17.4	"	Efficiency, efficiency at different loads and power factors.	1
18.4	"	Condition for maximum efficiency and solution to problems.	1
20.4	"	All day efficiency. Load corresponding to maximum efficiency.	1
21.4	"	Parallel operation of transformers.	1
24.4	"	Solution to problems.	1

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Date	Course No. & Title	No. of Student Present	Mention the Topics covered	If not taken mention the reasons	Remarks/ Signature of HOD/Director
28.3.2023	TH-1 EC-1	30	core & shell type transformer.		
31.3	"	31	conservator, tank, breather, explosion vent.		
3.4	"	30	Cooling methods core and maintenance		
4.4	"	24	EMF equation. ideal transformer.		
6.4	"	28	Solution to problems voltage transformation ratio.		
8.4	"	24	Transformers at no-load		
10.4	"	27	Phasor diagram of a loaded transformer.		AK
11.4	"	25	Equivalent resistance leakage reactance and impedance.		
13.4	"	24	Phasor diagram with winding resistance and magnetic leakage with L.P.F, leading P.F and lagging P.F.		
15.4	"	28	Equivalent circuits and related problems.		
17.4	"	30	Efficiency, efficiency at different loads and power factors.		
18.4	"	26	Condition for maximum efficiency, solution to problems.		
20.4	"	30	All day efficiency. Load corresponding to maximum efficiency.		
21.4	"	28	Parallel operation of transformers.		
24.4	"	28	Solution to problems.		

