

GOVERNMENT CO.ED POLYTECHNIC RAIPUR (C.G)
DEPARTMENT OF ELECTRICAL ENGINEERING
LESSON PLAN

Session: April May

Session start as per university calendar: 21/01/25

Course Name: AC Machines

Name of Subject Teacher: Mr. Deepak Patel

Lecturer plan L+T+P = 5

Course code: 2024472(024)

Discipline: EE		Semester: 4th		Class room Instruction Start Date:					
S.No.	Chapter No.	Topics	Sub Topic to be covered under this unit	Total hours	No. of periods planned	Actual No of periods taken	Date of Class Conduction	Use of AV resources if any	Remarks if any
1	1	Alternators	Types & Applications	17	3	3	3/02/25, 5/02/25, 5/02/25	NA	
			Construction – Salient and cylindrical rotor, equivalent circuit and phasor diagram		3	2	6/02/25 10/02/25		
			Voltage equation, Open circuit and short circuit characteristics		3	2	12/02/25		
			Synchronization and its condition, two bright and one dark lamp method		4	2	19/02/25		
			Cooling system of alternator, maintenance of given alternators		4	2	20/02/25 24/02/25		
2	2	Synchronous Motor	Working Principle, starting methods, Equivalent circuit and phasor diagram	15	3	2	25/02/25 27/02/25	NA	
			Effect of change in excitation and PF, V and Inverted V curves		3	2	3/03/25 05/03/25		
			Applications of synchronous motor, constant speed, condenser		3	2	05/03/25		
			Hunting and its prevention		3	2	6/03/25 10/03/25		

3	3	Three Phase Induction Motors	Maintenance of synchronous motors	18	3	3	11/03/25 12/03/25	NA
			Construction, types, SCIM, SRIM, working principle, Torque slip curve		3	3	17/03/25, 18/03/25 24/03/25	
			Torque equation, starting, running, and condition for max torque		3	3	26/03/25 - 2 27/03/25	
			Starter and its types, DOL, Star-delta, auto transformer type		3	3	31/03/25 02/04/25 - ②	
			No load and blocked rotor test, losses and efficiency		3	2	4/04/25 7/04/25	
			Speed control of SCIM and SRIM		3	3	08/04/25 09/04/25 - ②	
			Maintenance of different types of induction motors		3	3	15/04/25 16/04/25 - ②	
4	4	Single Phase Induction Motor	Construction working and types based on starting methods- split phase, resistance start, capacitor start, shaded pole	13	4	2	17/04/25 22/04/25	NA
			Double revolving field theory equivalent circuit		3	2	23/04/25	
			Speed /torque characteristics		3	2	24/04/25, 28/04/25	
			Maintenance of different types of single phase motors		3	3	29/04/25 30/04/25 - ②	
5	5	Special Electrical Machines	Construction, working, speed/torque characteristics	12	4	2	31/05/25 13/05/25	NA
			AC servo motor, linear induction motor		4	2	14/05/25	
			Reluctance motor, hysteresis motor, AC series, universal motor		4	1	15/05/25	

75 Hours

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