

Detailed Teaching Plan

Lecture No.	Unit No.	Topic to be covered	Books & Page Nos.	Notes Page Nos.	Slide Nos.	A/V Resource
L-01	1	Alternators: Types and applications		}		
L-02	1	Alternators: Types and applications				
L-03	1	Alternators: Types and applications				
L-04	1	Construction- Salient and Cylindrical rotor		}		
L-05	1	Construction- Salient and Cylindrical rotor				
L-06	1	Equivalent circuit and phasor diagram				
L-07	1	Equivalent circuit and phasor diagram		to		
L-08	1	Voltage equation		}		
L-09	1	Voltage regulation by synchronous impedance method, Open Circuit, Short Circuit characteristics			20	
L-10	1	Voltage regulation by synchronous impedance method, Open Circuit, Short Circuit characteristics				
L-11	1	Voltage regulation by synchronous impedance method, Open Circuit, Short Circuit characteristics				
L-12	1	Synchronization and conditions of synchronization				
L-13	1	Synchronization and conditions of synchronization				
L-14	1	Synchronization of alternator with bus bar/alternator: two bright and one dark lamp method				
L-15	1	Synchronization of alternator with bus bar/alternator: two bright and one dark lamp method				

Detailed Teaching Plan

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L-16	1	Cooling system of alternator		21		
L-17	1	Maintenance of given alternators				
L-18	2	Synchronous Motor : Working principle		21		
L-19	2	Synchronous Motor : Working principle				
L-20	2	Synchronous Motor : Working principle				
L-21	2	Starting methods		21		
L-22	2	Starting methods				
L-23	2	Equivalent circuit and phasor diagram		40		
L-24	2	Equivalent circuit and phasor diagram				
L-25	2	Effect of change in excitation and pf- 'V' and inverted 'V' curves		40		
L-26	2	Effect of change in excitation and pf- 'V' and inverted 'V' curves				
L-27	2	Applications of Synchronous motor - Synchronous condenser and constant speed				
L-28	2	Applications of Synchronous motor - Synchronous condenser and constant speed		2		
L-29	2	Hunting and its prevention				

Detailed Teaching Plan

Lecture No.	Unit No.	Topic to be covered	Books & Page Nos.	Notes Page Nos.	Slide Nos.	A/V Resource
L-30	2	Hunting and its prevention		41		
L-31	2	Maintenance of synchronous motors		42		
L-32	2	Maintenance of synchronous motors		43		
L-33	3	Three Phase Induction Motors: Construction, types Squirrel cage - Single, double cage, Wound rotor		44		
L-34	3	Three Phase Induction Motors: Construction, types Squirrel cage - Single, double cage, Wound rotor				
L-35	3	Three Phase Induction Motors: Construction, types Squirrel cage - Single, double cage, Wound rotor				
L-36	3	Working principle, Torque-Slip curve, equivalent circuit and phasor diagram		45		
L-37	3	Working principle, Torque-Slip curve, equivalent circuit and phasor diagram				
L-38	3	Working principle, Torque-Slip curve, equivalent circuit and phasor diagram				
L-39	3	Torque equation, Starting, running and condition for the maximum torque (Only expression)				
L-40	3	Torque equation, Starting, running and condition for the maximum torque (Only expression)		51		

Detailed Teaching Plan

Lecture No.	Unit No.	Topic to be covered	Books & Page Nos.	Notes Page Nos.	Slide Nos.	A/V Resource
L-41	3	Necessary of starter and types of starters- DOL, Star delta, auto transformer type and Rotor resistance starter.		51 to 65		
L-42	3	Necessary of starter and types of starters- DOL, Star delta, auto transformer type and Rotor resistance starter.				
L-43	3	Necessary of starter and types of starters- DOL, Star delta, auto transformer type and Rotor resistance starter.				
L-44	3	No load and Blocked rotor test, Losses and efficiency				
L-45	3	No load and Blocked rotor test, Losses and efficiency				
L-46	3	Speed control of squirrel cage and slipring induction motor				
L-47	3	Speed control of squirrel cage and slipring induction motor				
L-48	3	Speed control of squirrel cage and slipring induction motor				
L-49	3	Maintenance of different types of induction motors				
L-50	3	Maintenance of different types of induction motors				
L-51	4	Single Phase Induction Motor : Construction, working and types based on starting methods: split phase- Resistance Start, Capacitor start, Capacitor start capacitor run, Shaded pole induction motor		66		
L-52	4	Single Phase Induction Motor : Construction, working and types based on starting methods: split phase- Resistance Start, Capacitor start, Capacitor start capacitor run, Shaded pole induction motor				

Detailed Teaching Plan

Lecture No.	Unit No.	Topic to be covered	Books & Page Nos.	Notes Page Nos.	Slide Nos.	A/V Resource	
L-53	4	Single Phase Induction Motor : Construction, working and types based on starting methods: split phase- Resistance Start, Capacitor start, Capacitor start capacitor run, Shaded pole induction motor		} 16 to 85			
L-54	4	Single Phase Induction Motor : Construction, working and types based on starting methods: split phase- Resistance Start, Capacitor start, Capacitor start capacitor run, Shaded pole induction motor					
L-55	4	Double revolving field theory – equivalent circuit.					
L-56	4	Double revolving field theory – equivalent circuit.					
L-57	4	Double revolving field theory – equivalent circuit.					
L-58	4	Speed/ torque characteristics					
L-59	4	Speed/ torque characteristics					
L-60	4	Speed/ torque characteristics					
L-61	4	Maintenance of different types of single-phase motors					
L-62	4	Maintenance of different types of single-phase motors					
L-63	4	Maintenance of different types of single-phase motors					
L-64	5	Special electrical Machines : Construction, working Speed/ torque characteristics (where ever applicable) and applications of Special electrical machines : AC servo motor			} 86		
L-65	5	Special electrical Machines : Construction, working Speed/ torque characteristics (where ever applicable) and applications of Special electrical machines : AC servo motor					
L-66	5	Special electrical Machines : Construction, working Speed/ torque characteristics (where ever applicable) and applications of Special electrical machines : AC servo motor					

Detailed Teaching Plan

Lecture No.	Unit No.	Topic to be covered	Books & Page Nos.	Notes Page Nos.	Slide Nos.	A/V Resource
L-67	5	Special electrical Machines: Construction, working Speed/ torque characteristics (where ever applicable) and applications of Special electrical machines : Linear Induction Motor(LIM) ✓		86 70 104		
L-68	5	Special electrical Machines: Construction, working Speed/ torque characteristics (where ever applicable) and applications of Special electrical machines : Linear Induction Motor(LIM)				
L-69	5	Special electrical Machines: Construction, working Speed/ torque characteristics (where ever applicable) and applications of Special electrical machines : Linear Induction Motor(LIM)				
L-70	5	Special electrical Machines: Construction, working Speed/ torque characteristics (where ever applicable) and applications of Special electrical machines : Reluctance motor				
L-71	5	Special electrical Machines: Construction, working Speed/ torque characteristics (where ever applicable) and applications of Special electrical machines : Reluctance motor				
L-72	5	Special electrical Machines: Construction, working Speed/ torque characteristics (where ever applicable) and applications of Special electrical machines : Hysteresis motor				
L-73	5	Special electrical Machines: Construction, working Speed/ torque characteristics (where ever applicable) and applications of Special electrical machines : Hysteresis motor				
L-74	5	Special electrical Machines: Construction, working Speed/ torque characteristics (where ever applicable) and applications of Special electrical machines : Ac series/ Universal motor				
L-75	5	Special electrical Machines: Construction, working Speed/ torque characteristics (where ever applicable) and applications of Special electrical machines : Ac series/ Universal motor				

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Signature of Lecturer

Signature of HOD

