

Department of Electrical and Electronics Engineering

Lesson Plan & Work-done Diary for AY:2024-25, ODD Semester

Course with Code: Transformers and Generators – BEE304				Faculty: Mrs. Sowmyashree K S			Semester & Section: III	
Class No.	Date planned (DD/MM)	Topics to be covered	TLP Planned	Class No.	Date of Conduction (DD/MM)	Topics Covered	TLP Executed	Remarks if any deviation
MODULE-1								
1		Introduction about the course, Course Outcome, Syllabus discussion						
2		Fundamentals, faradays laws, Lenzs law, construction of transformer						
3		Working principle of transformer, core and shell type, EMF equation						
4		Losses and efficiency of transformer						
5		Condition for maximum efficiency, practical transformer on no-load and load						



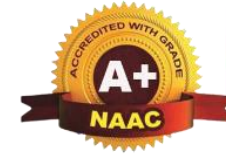
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MODULE-2									
1		Introduction, Constructional features of three-phase transformers							
2		Transformer connection for three-phase operation– star/star, delta/delta and star/delta, comparative features							
3		Labelling of three-phase transformer terminals, Necessity of Parallel operation, conditions for parallel operation– Single phase and three phases							
4		Load sharing in case of similar and dissimilar transformers							
5		Numerical							
6		Introduction to autotransformer-copper economy							

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7		equivalent circuit, no load, and on-load tap changing transformers						
8		Numerical						

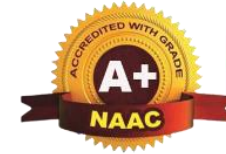
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MODULE-3								
1		Construction, working, Armature windings, winding factors						
2		EMF equation, . Harmonics– causes, reduction, and elimination						
3		Armature reaction, Synchronous reactance, Equivalent circuit.						
4		Numerical						



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5		Open circuit and short circuit characteristics, Assessment of reactance-short circuit ratio, Alternator on load						
6		Voltage regulation. Voltage regulation by EMF and MMF methods						
7		Excitation control for constant terminal voltage						
8		Numerical						

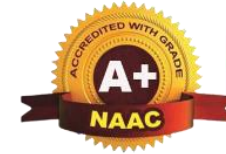
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MODULE-4									
1		Effects of saliency, two-reaction theory							
2		Parallel operation of generators and load-sharing							



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3	Methods of Synchronization, Synchronizing power						
4	Numericals						
5	Power angle characteristic (salient and non-salient pole), power angle diagram						
6	reluctance power, Capability curve for large turbo generators. Hunting and damper windings						
7	Numerical						
8	Numerical						

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MODULE-5								
1		Basic components of wind energy conversion system						



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2	types of wind generators- Horizontal and vertical axis						
3	types of wind generators- Horizontal and vertical axis						
4	Advantages and disadvantages of WECS						
5	principle of solar cell						
6	Basic Solar Photo voltaic, system for power generation						
7	Basic Solar Photo voltaic, system for power generation						
8	Advantages and disadvantages.						

Sl. No.	Activity	Planned	Actual	Remarks
1	Theory Classes			
2	Assignments/Quizzes/ Self study			
3	Tutorials/ Extra classes			



A T M E

College of Engineering



10519



ISO 9001:2015



Department of EEE
Emitting Elite Energy

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4	Internal Assessments			
5	ICT based Teaching (% of usage in Curriculum)			
Planning			Execution	
Faculty Signature:			Faculty Signature:	
HoD Signature:			HoD Signature:	