GOVT. POLYTECHNIC MAYURBHANJ LESSON PLAN- 2025/26 (SUMMER)

Discipline : ELECTRICAL ENGG.		Semester: 4th Sem		Name of the Teaching Faculty :LAXMIDHAR SAHU
Subject : EPTD		No. of Days / per week class allotted : 03		Semester From date : 22.12.2026 To Date : 18.04.2026
MONTH	Week	Day	Unit	Topics
DECEMBER	4TH		UNIT-1	**1. Basics of Transmission and Distribution**
		1ST		Single line diagrams with components of the electric supply transmission and distribution systems
		2nd		Classification of transmission lines
		5th		Primary and secondary transmission
	5TH	1st		Standard voltage level used in India
		2nd		Classification of transmission lines: based on type of voltage, voltage level, length and others
JANUARY	1ST	5th		Characteristics of high voltage for power transmission
	2ND	1st		Method of construction of electric supply transmission system- 110 kV, 220 kV, 400 kV
		2nd		Method of construction of electric supply distribution systems- 220 V, 400V, 11 kV, 33 kV
		5th		Tutorial class
	3rd	1st	UNIT-2	**2. Transmission Line Parameters and Performance**
		1st		Line Parameters: Concepts of R, L and C of line parameters and types of lines
		2nd		Performance of short line: Efficiency, regulation and its derivation, effect of power factor, vector diagram for different power factor
		5th		Performance of medium line: representation, nominal 'T', nominal 'π' method
	4th	1st		Performance of medium line:End condenser method
		2nd		Tutorial class
		5th		**NETAJI SUBHAS CHANDRA BOSE JAYANTI**
	5TH	1st		**REPUBLIC DAY**
		2nd		Transposition of conductors and its necessity,Skin effect and proximity effec
			UNIT-3	**3. Extra High Voltage Transmission**
		5th		Extra High Voltage AC (EHVAC) transmission line: Necessity, high voltage substation components such as transformers and other switchgears
FEBRUARY	1ST	1st		**FIRST MONTHLY TEST**
		2nd		**FIRST MONTHLY TEST**
		5th		Advantages, limitations and applications of EHVAC,EHVAC lines in India
	2ND	1st		Ferranti and Corona effect
		2nd		High Voltage DC (HVDC) Transmission Line: Necessity components, advantages, limitations and applications
		5th		Layout of monopolar, bi-Polar and homo-polar transmission lines of HVDC,HVDC Lines in India
	3rd	1st		Features of EHVAC and HVDC transmission line
		2nd		Flexible AC Transmission line: Features, types of FACTS controller,New trends in wireless transmission of electrical power
		5TH		**FIRST INTERNAL ASSESSMENT**
	4TH	1st		Tutorial class
			UNIT-4	**3. A.C Distribution System**
		2nd		AC distribution: Components classification, requirements of an ideal distribution system, primary and secondary distribution system
		5TH		Feeder and distributor, factors to be considered in design of feeder and distributor
MARCH	1ST	1st		Types of different distribution schemes: radial, ring, and grid, layout, advantages, disadvantages and applications
		2nd		**DOLO PURNIMA**
		5th		Voltage drop, sending end and receiving end voltage
	2ND	1st		Distribution Sub-Station: Classification, site selection, advantages, disadvantages and applications
		2nd		Single Line diagram (layout) of 33/11KV Sub-Station, 11KV/400V sub-station,Symbols and functions of their components
		5th		Tutorial class
	3rd		UNIT-5	**5. Components of Transmission and Distribution Line**
		1st		Overhead Conductors: Properties of material, types of conductor with trade names, significance of sag
		2nd		Line supports: Requirements, types of line structures and their specifications, methods of erection
		5th		Line Insulators, Properties of insulating material, Selection of material ,
	4TH	1st		Types of insulators and their applications , Causes of insulator failure
		2nd		Derivation of equation of string efficiency for string of three suspension insulator
		5th		**SREE RAMA NABAMI**
	5TH	1st		Methods of improving string efficiency
		2nd		Underground Cables: Requirements, classification
APRIL	1ST	5TH		**GOOD FRIDAY**
	2ND	1st		construction, comparison with overhead lines, cable laying and cable jointing.
		2nd		Tutorial class
		5th		**Semester Question Discussion**
	3rd	1st		**SECOND MONTHLY TEST**
		2nd		**MAHABISUBA SANKRANTI**
		5th		**Semester Question Discussion**