

GOVT. POLYTECHNIC MAYURBHANJ LESSON PLAN- 2024/25 (SUMMER)

Discipline :		Semester: 6th Sem		Name of the Teaching Faculty :LAXMIDHAR SAHU	
Subject : EI&E		No. of Days / per week class allotted : 05		Semester From date : 04.02.2025 To Date : 17.05.2025	
MONTH	Week	Day	Unit	Topics	
FEBRUARY	2nd		UNIT-1	INDIAN ELECTRICITY RULES	
		2nd		Definitions, Ampere, Apparatus, Accessible, Bare, cable, circuit, circuit breaker, conductor voltage (low, medium, high, EH), live, dead, cut-out, conduit, system, danger, Installation, earthing system, span, volt, switch gear, etc	
		3rd		General safety precautions, rule 29, 30, 31, 32, 33, 34, 35, 36, 40, 41, 43, 44, 45, 46.	
		4th		General conditions relating to supply and use of energy : rule 47, 48, 49, 50, 51, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 70	
		5th		OH lines : Rule 74, 75, 76, 77, 78, 79, 80, 86, 87, 88, 89, 90, 91	
	3rd		UNIT-2	ELECTRICAL INSTALLATIONS	
		1st		Electrical installations, domestics, industrial, Wiring System, Internal distribution of Electrical Energy.	
		2nd		Methods of wiring, systems of wiring, wire and cable, conductor materials used in cables, insulating materials mechanical protection.	
		3rd		Types of cables used in internal wiring, multi-stranded cables, voltage grinding of cables, general specifications of cables.	
		4th		Main switch and distribution boards, conduits, conduit accessories and fittings, lighting accessories and fittings, fuses, important definitions, determination of size of fuse – wire, fuse	
		5th		Earthing conductor, earthing, IS specifications regarding earthing of electrical installations, points to be earthed.	
	4th	1st	Determination of size of earth wire and earth plate for domestic and industrial installations. Material required for GI pipe earthing.		
		2nd	Aspects of good lighting services. Types of lighting schemes, design of lighting schemes, factory lighting		
		3rd	Public lighting installations, street lighting, general rules for wiring, determination of number of points (light, fan, socket, outlets), determination of total load, determination of Number of subcircuits.		
			UNIT-3	INTERNAL WIRING	
		4th		Type of internal wiring, cleat wiring, CTS wiring, wooden casing capping	

FEBRUARY	5th	5th	UNIT-3	Metal sheathed wiring, conduit wiring, their advantage and disadvantages, comparison and applications.
		1st		Prepare one estimate of materials required for CTS wiring for small domestic installation of one room and one verandah within 25 m2 with given light, fan & plug points.
		2nd		
		3rd		MAHA SHIVA RATRI
		4th		
		5th		Prepare one estimate of materials required for conduit wiring for small domestic installation of one room and one verandha within 25 m2 with given light, fan & plug points.
MARCH	2nd	1st	UNIT-3	Prepare one estimate of materials required for concealed wiring for domestic installation of two rooms and one latrine, bath, kitchen & verandah within 80m2 with given light, fan & plug points.
		2nd		
		3rd		PANCHAYAT RAJ DIVAS
		4th		
		5th		Prepare one estimate of materials required for erection of conduct wiring to a small workshop installation about 30m2 and load within 10 KW.
	3rd	1st	UNIT-4	FIRST MONTHLY TEST
		2nd		FIRST MONTHLY TEST
				OVER HEAD INSTALLATION
		3rd		Main components of overhead lines, line supports, factors Governing Height of pole
		4th		Conductor materials, determination of size of conductor for overhead transmission line, cross arms
	4th	5th	UNIT-4	DOLO PURNIMA
		1st		Pole brackets and clamps, guys and stays,conductors configurations,spacing and clearances,span lengths
		2nd		Overhead line insulators, types of insulators, lighting arresters, danger plates, anti-climbing devices, bird guards, beads of jumpers, jumpers, tee-offs, guarding of overhead lines
		3rd		
		4th		Prepare an estimate of materials required for LT distribution line within load of 100 KW maximum and standard spans involving calculation of the size of conductor (from conductor chart), current carrying capacity and voltage regulation consideration using ACSR.
		5th		
		1st		Question Discussion
		2nd		Tutorial
	5th		UNIT-5	OVER HEAD SERVICE LINES
		3rd		Components of service lines, service line (cables and conductors), bearer wire, lacing rod.
		4th		
		5th		Ariel fuse, service support, energy box and meters etc.
	6th	1st		ID-UL-FITRE

APRIL	1st	2nd	UNIT-5	UTKAL DIWAS		
		3rd		Prepare and estimate for providing single phase supply of load of 5 KW (light, fan, socket) to a single stored residential building.		
		4th				
		5th				
	2nd	1st			Prepare and estimate for providing single phase supply load of 3KW to each floor of a double stored building having separate energy meter	
		2nd				
		3rd		Prepare one estimate of materials required for service connection to a factory building with load within 15 KW using insulated wire.		
		4th				
		5th				
	3rd	1st		B.R. AMBEDKAR JAYANTI		
		2nd		Question Discussion		
		3rd		INTERNAL ASSESSMENT		
		4th		INTERNAL ASSESSMENT		
		5th		GOOD FRIDAY		
	4th	1st		Question Discussion		
		2nd		Tutorial		
		3rd		ESTIMATING FOR DISTRIBUTION SUBSTATIONS		
				Types of different distribution transformers		
				Prepare one materials estimate for following types of transformer substations Pole mounted substation		
				Question Discussion		
5th		1st	Prepare one materials estimate for following types of transformer substations Plinth Mounted substation			
	2nd					
	3rd					
MAY	1st	4th	UNIT-8	Prepare one materials estimate for following types of transformer substations Plinth Mounted substation		
		5th				
	2nd	1st		Question Discussion		
		2nd		Tutorial		
		3rd		Tutorial		
		4th		Semester Question Discussion		
		5th		Semester Question Discussion		
	3rd	1st		BUDHA PURNIMA		
		2nd		Semester Question Discussion		
		3rd		Semester Question Discussion		
		4th		Semester Question Discussion		
		5th		SECOND MONTHLY TEST		