


# SYNERGY POLYTECHNIC, BBSR

## The Lesson Plan

Discipline: EE	Semester: 6th	Name of the Teaching Faculty: Prof. D.D. Sahu
Subject: EIE	No of Days/per week class allotted: 4	Semester from Date: 16/1/24 to Date: 26/4/24 No of Weeks: 15
Week	Class Day	Theory/Practical Topics
1st	1st	IE Rules. Definitions, Amperes, Apparatus, Assessable, Bare, cable, circuit, circuit breaker
	2nd	Conductor voltage (low, medium, high EHV) live, dead, cutout, conduit, system
	3rd	Earthing system, span, volt, switch gear etc.
	4th	General safety precautions, rule 29, 30, 31, 32, 33, 34, 35, 36, 40, 41, 43, 44, 45, 46.
	5th	
2nd	1st	General Conditions relating to supply & use of energy: rule - 47, 48, 49, 50
	2nd	51, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 70.
	3rd	OH lines: Rule 74, 75, 76, 77, 78, 79, 80, 86, 87, 88, 89, 90, 91
	4th	Electrical Installations. domestic,
	5th	Industrial wiring system, internal distribution of elec. energy.
3rd	1st	Methods of wiring, system of wiring wire, cable, conductor material used
	2nd	in cables, insulating material, Types of cables used in internal wiring
	3rd	Multi-stranded cables, voltage grading of cables, Gen. specification of cables
	4th	Accessories: - Main switch, Distribution Boards, Circuits, Conduit
	5th	accessories & fittings, lighting accessories and fittings, fuses, determination of
4th	1st	Size of fuse, wire, fuse units, Earthing conductor, IS Specification of Earthing
	2nd	pts to be earthed. Determination of size of earth wire and earth plate. for
	3rd	domestic & industrial installations. Material required for GI earthing.
	4th	Lighting Scheme: - Aspect of good lighting, Types of lighting, Scheme, factory
	5th	lighting, public place lighting, street lighting, general rules of wiring.
5th	1st	Determination of no of pts, determination of total load, no of sub circuits.
	2nd	Internal Exam.
	3rd	Internal Wiring: Types of internal wiring, cleat wiring, CTS wiring.
	4th	wooden casing capping, metal sheathed wiring, conduit wiring, their advantages & dis-adv.
	5th	

  
Sign of Faculty

HOD

  
Principal 16/1/24

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Discipline: <b>EE</b>		Semester: <b>6th</b>	Name of the Teaching Faculty: <b>Prof. D.D. Sahu</b>
Subject: <b>Elect. Installation &amp; Estimating</b>		No of Days/per week class allotted: <b>4</b>	Semester from Date: <b>16/1/24</b> to Date: <b>26/4/24</b> No of Weeks: <b>15</b>
Week	Class Day	Theory/Practical Topics	
<b>6th</b>	1st	Preparation of estimate of materials required for CTS wiring for small domestic installation of one room & one verandah within 25m <sup>2</sup> with given light, fan & plug pts.	
	2nd	Preparation of an estimate of material required for conduit wiring of one room & verandah.	
	3rd	Preparation of estimate of materials for concealed conduit wiring for two rooms & one latrine, kitchen & verandah within 30m <sup>2</sup> with given light, fan & plug pts.	
	4th		
	5th		
<b>7th</b>	1st	Preparation of one estimate for erection of conduit wiring of a small work shop.	
	2nd	<b>Over Head Installation</b>	Main components of O.H. lines, line supports, factors governing ht of poles, cond. materials, determination of size of cond. for O.H. Transmission
	3rd		lines, cross arms, pole brackets & clamp guys' & stays.
	4th		
	5th		
5th			
<b>8th</b>	1st	conductor configurations, spacing & clearance span lengths, O.H. line insulators	
	2nd	lighting arrestors, danger plates, anti-climbing devices, bird guards, beads of jumpers.	
	3rd	tee off, guarding of OH lines.	
	4th	Preparation of estimate of materials required for LT distribution line with load of 100kw max and standard spans, calculation of size of conductor, ct carrying capacity & voltage regulation consideration for ACSR. Solve one problem.	
	5th		
<b>9th</b>	1st	Preparation of an estimate of materials required for H.T. distribution line (11kv) within 2km & load of 2000 KVA max, involving calculation of size of cond.	
	2nd	Using ACSR cond. considering, ct carrying capacity & voltage regulation.	
	3rd		
	4th		
	5th		
<b>10th</b>	1st	<b>O.H. Service Lines.</b>	Discussion of service lines, heater wire lacing rod, Aerial fuse, service support energy box & meters etc. Solve one problem of 5kw light load to a single storey building.
	2nd		Preparation of an estimate of materials for a load of 3kw to each floor of a double storey building having separate meter.
	3rd		
	4th		
	5th		

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Discipline:	Semester:	Name of the Teaching Faculty:
Subject:	No of Days/per week class allotted:	Semester from Date: to Date: No of Weeks:
Week	Class Day	Theory/Practical Topics
11th	1st	Preparation of an estimate for service connection to a factory with load of 15kw using insulated wire.
	2nd	Preparation of estimate to a factory of load 15kw using bare conductor & insulated wire combined.
	3rd	
	4th	
	5th	
<del>12th</del> 12th	1st	Class Test.
	2nd	Estimating of Substations.
	3rd	Preparation of estimate of materials required for pole mounted Sub-Station.
	4th	Description of materials.
	5th	
13th	1st	Preparation of estimate of materials required for pole mounted Sub station.
	2nd	Discussion on accessories used.
	3rd	
	4th	
	5th	
14th	1st	Revision of all estimates & discussion on FAQ.
	2nd	
	3rd	
	4th	
	5th	
5th	1st	Revision class
	2nd	
	3rd	
	4th	
	5th	

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