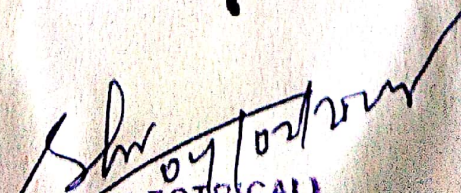


DISCIPLINE	SEMESTER	NAME OF THE TEACHING FACULTY	
ELECTRICAL	6TH	SRI SUSHANTA KUMAR MALIK, SR. LECTURER	
SUBJECT: E I & E (TH-1)		NO. OF DAYS PER WEEK CLASS ALLOTTED : 05	SEMESTER FROM 04/02/2025 TO 17/05/2025
		NO. OF WEEKS : 12 NOS.	
WEEKS	CLASS DAYS	THEORY TOPICS	
1ST	1ST	Definitions, Ampere, Apparatus, 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	
	2ND	General safety precautions, rule 29, 30, 31, 32, 33, 34, 35, 36, 40, 41, 43, 44, 45, 46	
	3RD	General conditions relating to supply and use of energy : rule 47, 48, 49, 50, 51, 54, 55, 56, 57, 58, 59, 60	
	4TH	General conditions relating to supply and use of energy : rule 61, 62, 63, 64, 65, 66, 67, 68, 70	
	5TH	OH lines : Rule 74, 75, 76, 77, 78, 79	
2ND	1ST	OH lines : Rule 80, 86, 87, 88, 89, 90, 91	
	2ND	Electrical installations, domestics, industrial, Wiring system, Internal distribution of Electrical Energy	
	3RD	Methods of wiring, systems of wiring	
	4TH	wire and cable, conductormaterials used in cables, insulating materials mechanical protection	
	5TH	Types of cables used in internal wiring, multi-stranded cables, voltage grinding of cables, general specifications of cables	
3RD	1ST	Main switch and distribution boards, conduits, conduitaccessories and fittings, lighting accessories and fittings, fuses	
	2ND	Determination of size of fuse – wire, fuse units. Earthing conductor, earthing, IS specifications regarding earthing of electrical installations,	
	3RD	Points to be earthed. Determination of size of earth wire and earth plate for domestic and industrial installations	
	4TH	Material required for GI pipe earthing.	
	5TH	Aspects of good lighting services. Types of lighting schemes	
4TH	1ST	Design of lighting schemes, factory lighting, public lighting installations	
	2ND	Street lighting, general rules for wiring, determination of number of points (light, fan, socket, outlets	
	3RD	Determination of total load, determination of Number of subcircuits	
	4TH	Type of internal wiring, cleat wiring, CTS wiring	
	5TH	Wooden casing capping, metal sheathed wiring, conduit wiring, their advantage and disadvantages comparison and applications	
5TH	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	Continue problem 1	
	3RD	Continue problem 1	
	4TH	Prepare one estimate of materials required for conduit wiring for small domestic installation of one room and one verandah within 25 m2 with given light, fan & plug points	
	5TH	Continue problem 2	
6TH	1ST	Continue problem 2	
	2ND	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	
	3RD	Continue problem 3	
	4TH	Continue problem 3	
	5TH	Prepare one estimate of materials required for erection of conduct wiring to a small workshop installation about 30m2 and load within 10 KW	
7TH	1ST	Continue problem 4	
	2ND	Continue problem 4	
	3RD	Main components of overhead lines, line supports, factors Governing Height of pole, conductor materials, determination of size of conductor for overhead transmission line	



	4TH	Cross arms, pole brackets and clamps, guys and stays, conductors configurations, spacing and clearance span lengths, overhead line insulators, types of insulators
	5TH	lighting arresters, danger plates, anti-climbing devices, bird guards, beads of jumpers, jumpers, tee-offs guarding of overhead lines
8TH	1ST	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
	2ND	Continue problem 5
	3RD	Continue problem 5
	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	Continue problem 6
9TH	1ST	Continue problem 6
	2ND	Prepare an estimate of materials required for HT distribution line (11 KV) within 2 km and load of 2000 KVA maximum and standard spans involving calculation of the size of conductor (from conductor chart) current carrying capacity and voltage regulation of the size of conductor (from conductor chart), current carrying capacity and voltage regulation consider action using ACSR
	3RD	Continue problem 7
	4TH	Continue problem 7
	5TH	Components of service lines, service line (cables and conductors), bearer wire, lacing rod. Ariel fuse, service support, energy box and meters etc
10TH	1ST	Prepare and estimate for providing single phase supply of load of 5 KW (light, fan, socket) to a single stored residential building.
	2ND	Continue problem 8
	3RD	Prepare and estimate for providing single phase supply load of 3KW to each floor of a double stored building having separate energy meter
	4TH	Continue problem 9
	5TH	4 Prepare one estimate of materials required for service connection to a factory building with load with 15 KW using insulated wire.
11TH	1ST	Continue problem 10
	2ND	Continue problem 10
	3RD	Prepare one estimate of materials required for service connection to a factory building with load within 15 KW using bare conductor and insulated wire combined
	4TH	Continue problem 11
	5TH	Continue problem 11
12TH	1ST	Prepare one materials estimate for following types of transformer substations. Pole mounted substation.
	2ND	Continue problem 12
	3RD	Plinth Mounted substation.
	4TH	Continue problem 13
	5TH	Continue problem 13

  
 HOD (ELECTRICAL)  
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