

**LESSON PLAN-2021-2022**

**SWAMI VIVEKANANDA SCHOOL OF ENGG & TECH, BBSR**

<b>Discipline- ELECTRICAL</b>	<b>Semester-6TH</b>	<b>Name of Teaching faculty- SOUMYA RANJAN MANTHAN</b>
<b>SUBJECT- EIE</b>	<b>No of days/ per week class allotted-5</b>	<b>SEM From date-1/16/2024 No of weeks-</b>
<b>WEEK</b>	<b>CLASS DAY</b>	<b>THEORY TOPICS</b>
		<b>INDIAN ELECTRICITY RULES</b>
<b>4TH</b>	1/16/2024	Definitions, Ampere, Apparatus, Accessible, Bare, cable, circuit, circuit breaker
	1/17/2024	conductor voltage (low, medium, high, EH), live, dead, danger, Installation, earthing system, span
	1/18/2024	General safety precautions, rule 29, 30, 31, 32, 33, 34, 35, 36, 40, 41, 43, 44, 45, 46
	1/19/2024	General conditions relating to supply and use of energy : rule 47, 48, 49, 50, 51,
	1/20/2024	54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 70
	1/22/2024	OH lines : Rule 74, 75, 76, 77, 78, 79, 80, 86, 87, 88, 89, 90, 91
	1/23/2024	<b>INTERNAL WIRING</b>
	1/24/2024	Type of internal wiring, cleat wiring, CTS wiring, wooden casing capping,
<b>1ST</b>	1/25/2024	metal sheathed wiring, conduit wiring, their advantage and disadvantages comparison
	1/27/2024	Prepare one estimate of materials required for CTS wiring for small domestic installation of one room and one verandah within 25 m <sup>2</sup> with given light, fan & plug points.
	1/29/2024	do
	1/30/2024	do
<b>2ND</b>	1/31/2024	Estimate of materials required for conduit wiring for small domestic
	2/01/2024	do
	2/02/2024	concealed wiring for installation of two rooms, one latrine, bath, kitchen & verandah within 80m <sup>2</sup>
	2/03/2024	do
	2/05/2024	Erection of conduct wiring to a small workshop installation about 30m <sup>2</sup> and load within 10 KW.
<b>3RD</b>	2/06/2024	do
	2/07/2024	Assignments
	2/08/2024	doubt clearing
	2/09/2024	<b>OVER HEAD INSTALLATION</b>
	2/10/2024	line supports, Height of pole, conductor materials, determination of size of conductor for overhead
	2/12/2024	transmission line, cross arms, pole bracket clamps, guys and stays, conductors configurations,

4TH	2/13/2024	spacing and clearances, span lengths, overhead line insulators, types of insulators,
	2/14/2024	anti-climbing devices, bird guards, beads of jumpers, jumpers, tee-offs, guarding of overhead lines
	2/15/2024	Prepare an estimate of materials required for LT distribution line within load of 100 KW maximum standard spans involving calculation of the size of conductor (from conductor chart) current carrying capacity and voltage regulation consideration using ACSR
	2/16/2024	do
	2/19/2024	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
	2/20/2024	Prepare an estimate of materials required for HT distribution line (11 KV) within 2 km and load of 2000 KVA maximum and standard spans
5TH	2/21/2024	calculation of the size of conductor (from conductor chart), current carrying capacity
	2/22/2024	current carrying capacity and voltage regulation consider action using ACSR.
	2/25/2024	<b>ELECTRICAL INSTALLATIONS</b>
	2/26/2024	Electrical installations, domestics, industrial, Wiring System, Internal distribution of Electrical Energy.
1ST	2/27/2024	Methods of wiring, systems of wiring, conductor materials used in cables, insulating materials
	2/28/2024	Types of cables used in internal wiring, multi-stranded cables, voltage grinding of cables,
	2/29/2024	Main switch and distribution boards, conduits, conduit accessories and fittings, lighting accessories
	3/01/2024	Fittings, fuses, important definitions, determination of size of fuse – wire, fuse units. Earthing conductor,
	3/02/2024	IS specifications regarding earthing of electrical installations, points to be earthed. Determination of size of earth wire
2ND	3/04/2024	Industrial installations, Material required for GI pipe earthing
	3/05/2024	do
	3/06/2024	Aspects of good lighting services. Types of lighting schemes, design of lighting schemes
	3/07/2024	factory lighting, public lighting installations, street lighting, general rules for wiring,
	3/09/2024	determination of number of points (light, fan, socket, outlets),
3RD	3/11/2024	determination of total load, determination of Number of sub circuits
		Assignments
	3/12/2024	<b>OVER HEAD SERVICE LINES</b>
	3/13/2024	Components of service lines
	3/14/2024	Bearer wire, lacing rod, Ariel fuse, service support, energy box and meters etc.

	3/15/2024	Prepare and estimate for providing single phase supply of load of 5 KW (light, fan, socket) to a single stored residential building
	3/16/2024	Prepare and estimate for providing single phase supply load of 3KW to each floor of a double stored building having separate energy meter
4TH	3/18/2024	do
	3/19/2024	Service connection to a factory building with load within 15 KW using insulated wire.
	3/20/2024	do
	3/21/2024	Load within 15 KW using bare conductor and insulated wire combined.
	3/22/2024	do
	3/23/2024	Assignments
1ST	3/26/2024	<b>ESTIMATING FOR DISTRIBUTION SUBSTATIONS</b>
	3/27/2024	Prepare one materials estimate for Pole mounted substation
	3/28/2024	do
	3/29/2024	Prepare one materials estimate for Plinth mounted substation
	3/30/2024	do

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HOD

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