I.C.T.		LESSON PLAN	
Discipline	Discipline Semester:- Name of the Teaching Faculty:- Sudipta Kumar das		
Electrical Engg.			
Subject:	No of Days/per	Semester From:- 04th Feb, 2025 To:- 17th May,2025	
	Week Class Allotted :-	No of Weeks:-15	
EI&E	4+1{Tutorial)	140 01 Weeks. 15	
Week	Class Day	Theory/ Practical Topics	
	1st	1. INDIAN ELECTRICITY RULES	
1 st		Definitions, Ampere, Apparatus, Accessible, Bare, cablew, circuit, circuit breaker, conductor voltage (low, medium, high, EH)	
	2nd	1.1 live, dead, cut-out, conduit, system, danger, Installation, earthing system, span, volt, switch	
		gear, etc. 1.2 General safety precautions, rule 29, 30, 31, 32, 33, 34, 35, 36, 40, 41, 43, 44, 45, 46.	
	3rd 4th	1.3 General conditions relating to supply and use of energy: rule 47, 48, 49, 50, 51, 54, 53,	
	5th	1.3 General conditions relating to supply and use of energy: rule 56, 57, 58, 59, 60, 61, 62, 63, 64,	
		65, 66, 67, 68, 70.	
	1st	1.4 OH lines : Rule 74, 75, 76, 77, 78, 79, 80, 86, 87, 88, 89, 90, 91	
	2nd	2 ELECTRICAL INSTALLATIONS	
		2. 1 Electrical installations, domestics, industrial, Wiring System, Internal	
2nd		distribution of Electrical Energy. 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. 2. 2 ACCESSORIES: Main switch and distribution boards, conduits, conduit accessories and	
	4 th	fittings, lighting accessories and fittings, fuses, important definitions, determination of size of fuse	
		- wire fuse units Farthing conductor, earthing	
	5th	IS specifications regarding earthing of electrical installations, points to be earthed	
		Determination of size of earth wire and earth plate for domestic and industrial	
	1st	installations Material required for GI pipe earthing.	
	2nd	2.3 LIGHTING SCHEME: Aspects of good lighting services. Types of lighting	
3rd	-	schemes, design of lighting schemes, factory lighting, public lighting	
		installations, street lighting, general rules for wiring determination of number	
	3rd	of points (light, fan, socket, outlets), determination of total load, determination	
		of Number of sub-circuits	
	4th	3. INTERNAL WIRING	
		3.1 Type of internal wiring, cleat wiring, CTS wiring, wooden casing capping,	
	5 th	metal sheathed wiring, conduit wiring, their advantage and disadvantages comparison and applications.	
		comparison and applications.	
	1st	3 . 2 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.	
4th	2 nd	3. 3 Prepare one estimate of materials required for conduit wiring for small	
		domestic installation of one room and one verandha within 25 m ² with given light, fan & plug points.	
	3.4	3. 4 Prepare one estimate of materials required for concealed wiring for domestic	
	3 rd	installation of two rooms and one latrine, bath, kitchen & verandah within 80m ²	
		with given light, fan & plug points	
	4th	3.5 Prepare one estimate of materials required for erection of conduct wiring to a	
		small workshop installation about 30m ² and load within 10 KW.	
	5 th	3.5 Prepare one estimate of materials required for erection of conduct wiring to a small workshop installation about 30m ² and load within 10 KW.(Contd)	
		small workshop histaliation about 30th and load within 10 KW.(Cond)	
		3 . 5 Prepare one estimate of materials required for erection of conduct wiring to a	
	1st	small workshop installation about 30m ² and load within 10 KW.	
5 th	and	3.5 Prepare one estimate of materials required for erection of conduct wiring to a	
	2 nd	small workshop installation about 30m ² and load within 10 KW.	
	bnc	3.5 Prepare one estimate of materials required for erection of conduct wiring to a	
		small workshop installation about 30m ² and load within 10 KW.	
		3.5 Prepare one estimate of materials required for erection of conduct wiring to a	
		small workshop installation about 30m ² and load within 10 KW.	
		3.5 Prepare one estimate of materials required for erection of conduct wiring to a	
	5th	5, 5 repare one estimate of materials required for election of conduct witing to a	

	1st	5. OVER HEAD SERVICE LINES
6th		Components of service lines service line (set-lessed and set-lessed and service lines
	2nd	Components of service times earned line (entitles and decided and
		lacing rod. Ariel fuse, service support, energy box and meters etc
	3rd	
	416	fan, socket) to a single stored residential building.
	4 th	5.2 Prepare and estimate for providing single 1
	5th	fan, socket) to a single stored residential building.
	3	5.5 Prepare and estimate for providing sincl. 1
		5.3 Prepare and estimate for providing single phase supply load of 3KW to ear floor of a double stored building having separate grants.
		floor of a double stored building having separate energy meter. (Contd)
	1st	5.3 Prepare and actimate Constitution in the second
		5.3 Prepare and estimate for providing single phase supply load of 3KW to each
7th	2nd	5.3 Prepare and estimate for the separate energy meter.
	2-1	floor of a double stored building having separate energy meter. 5.4 Prepare one estimate of separate energy meter.
	3rd	5.4 Prepare one estimate of any interest of the second of
	416	building with load within 15 KW using insulated wire.
	4th	3.4 Prepare one activate C
	5th	5.4 Prepare one estimate of materials required for service connection to a factory 5.4 Prepare one estimate of materials required for service connection to a factory 5.4 Prepare one estimate of SKW using insulated wire.
	3**	5.4 Prepare one actimate 6
		building with load within 15 KW using insulated wire.(Contd)
		Bmer wher (Conta)
	1st	5.4 Prepare one estimate of materials required for service connection to a factory 5.5 Prepare.
Out	2nd	building with load within 15 KW using insulated wire. 5.5 Prepare one estimate of materials required for service connection to a factory
81h	2110	
		building with load within 15 KW using bare conductor and insulated wire
	3rd	
	3	5.5 Prepare one action to
		outlding with load within 15 KW using bare conduction to a factory
	4th	building with load within 15 KW using bare conductor and insulated wire
		J.J Frenare one anti-
		building with load within 15 KW using bare conductor and insulated wire
	5th	5.5 Prepare and insulated wire
		building with to detail of materials required for service connection
		5.5 Prepare one estimate of materials required for service connection to a factory combined.
		and insulated wire
Oak	1st	4 OVER IT
9th		4. OVER HEAD INSTALLATION
		pole conductors of overhead lines, line supports factors Communications
	2nd	Main components of overhead lines, line supports, factors Governing Height of transmission line, cross arms, pole brackets and clamps, grays overhead
	3rd	
		Insulators types of:
	12 43	insulators, types of insulators, lighting arresters, danger plates, anti-climbing lines. 4.2 Prepare an estimate of
		lines. lines, beauts of jumpers, jumpers, tee-offs, guarding of acceptance
	4th	4.2 Prepare an estimate of materials required for LT distribution line within load of conductor (from conductors of the size o
		100 KW maximum and standard spans involving calculation of the size of regulation conductor (from conductor chart), current carrying canadity and the size of
		conductor (from conductor chart), current carrying calculation of the size of regulation consideration using ACSR.
		regulation conductor chart), current carrying capacity and voltage 4.2 Prepare and voltage
	5 th	
		100 KW maximum and standard spans involved.
		100 KW maximum and standard spans involving calculation of the size of conductor (from conductor chart), current carrying capacity and
	Cib	
	6 th	Tutorial
	1st	4.2 Prepare an estimate of materials required for LT distribution line within load of conductor (from conductor and spans involving calculation of the size of
10th		100 KW maximum and standard spans involving calculation of the size of conductor (from conductor chart), current carrying capsaids of the size of regulation considers:
		conductor (from conductor chart) current ving calculation of the size of
	2nd	4 / Prenare an action of
		100 KW maximum and standard spans involving calculation of the size of conductor (from conductor chart), current carrying constitution of the size of
		1 ICEUIATION COnsideration using A con-
	3rd	4.7 Prepare on actimate of
		100 KW maximum and standard spans involving calculation of the size of conductor (from conductor chart), current carrying careaity
		Conductor (from conductor chart)
	est.	regulation consideration using ACSR. 4.2 Prepare an estimate of materials required for LT distribution line within load of
and the same of th	4th	4 / Frenare an actimate of

		100 KW maximum and standard spans involving calculation of the size of regulation consideration using ACCO to the size of regulation consideration using ACCO.	
	5th	conductor (from conductor chart), current carrying capacity and voltage 4.3. Prepare an estimate 5.	
		100 KW maying estimate of materials required for LT distribute	
		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.	
	lat	and voltage	
	1,44	4.3. Prepare an estimate of materials required for LT distribution line within load of conductor (from an ad standard spans involving calculation of the size of	
11th			
	2nd	- Stration considered:	
	4	100 KW maximum and state of materials required for LT distribution line within load of	
		Total Clor (Ifom conducts of the size of	
	3rd	4.3. Prepare an estimate of mothility	
		100 KW maximum and standard spans involving calculation of the size of	
	4th	regulation consideration using ACCP	
	4"	T.S. Frepare an estimate of materials	
		conductor (from conductor cheet)	
	5th	4.4 Prepare an estimate of materials as with 1.5 Miles	
		4.4 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)	
		capacity and voltage regulation of the size of conductor chart), current carrying	
	3	current carrying capacity and voltage regulation consideration using ACSR.	
* * 1	Ist		
12th		4.4 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 a standard spans involving	3 7
		calculation of the size of conductor (from conductor chart), current carrying	
		current carrying capacity and voltage regulation possible to conductor chart),	
	2 nd		
		calculation of the size of conductor (from conductors about	
		The state of the s	
	3rd	current carrying capacity and voltage regulation consideration using ACSR. 4.4 Prepare an estimate of materials required for HT distribution line (11 KV)	
		1	
		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 of the size of conductor (from conductor chart),	
	4th	current carrying capacity and voltage regulation consideration using ACSR. 4.4 Prepare an estimate of materials required for HT distribution line (11 KV)	
		Within 2 kill and load of 2000 KVA maximim and standard mana insert.	
		Calculation of the Size of conductor (from conductor chart) assessed	
		capacity and voltage regulation of the size of conductor (from conductor chart), current carrying capacity and voltage regulation consideration using ACSR.	
	5th	1 7.7 1 repair an estimate of materials required for HT distribution line (11 to p)	
		calculation of the size of conductor (from conductor chart) gurrent committee	
		capacity and voltage regulation of the size of conductor (from conductor chart)	
		current carrying capacity and voltage regulation consideration using ACSR.	
	1 st	4.4 Prepare an estimate of materials required for HT distribution line (11 KV)	
13th		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 consideration using ACSP	
	2 nd	6. ESTIMATING FOR DISTRIBUTION SUBSTATIONS Prepare one materials estimate for following types of transformer substations.	
		Pole mounted substation	
	3rd	6.1.1 Pole mounted substation	
	4 th	6.1.1 Pole mounted substation	
	5 th	6.1.1 Pole mounted substation	
			184

2nd	6.1.1 Pole mounted substation	***
3rd		
4th	6.1.2 Plinth Mounted substation	
5th	6.1.2 Plinth Mounted substation.	
1 st	6.1.2 Plinth Mounted substation	
2 nd	6.1.2 Plinth Mounted substation	
3rd	Previous year question paper discussion	
4 th	Previous year question paper discussion	
5 th	Previous year question paper discussion	
	3 rd 4th 5th 2nd 3 rd 4th	3rd 6.1.2 Plinth Mounted substation. 4th 6.1.2 Plinth Mounted substation. 5th 6.1.2 Plinth Mounted substation. 1st 6.1.2 Plinth Mounted substation. 2nd 6.1.2 Plinth Mounted substation. 3rd Previous year question paper discussion 4th Previous year question paper discussion

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