ACADEMIC LESSON PLAN OF SUMMER 2024

Discipline **Electrical Engg.**	Semester: - **6th** **(Sec A)**	**Name of the Teaching Faculty: -Rakesh kumar Pattanayk**
Subject: **ELECTRICAL INSTALLATION AND ESTIMATING(TH-1)**	No. of days/per week class allotted : 4p/week Tutorial:1p/week	Semester From: 16th January 2024 to 26th April 2024
Week	Class Day	Theory Topics
1st	1st	**1. INDIAN ELECTRICITY RULES** 1.1 Definitions, Ampere, Apparatus, Accessible, Bare, cablew, 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	1.2 General safety precautions, rule 29, 30, 31, 32, 33, 34, 35, 36, 40, 41, 43, 44, 45, 46.
	3rd	1.3 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. .(cont..)
	4th	1.3 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	Tutorial
2nd	1st	1.4 OH lines : Rule 74, 75, 76, 77, 78, 79, 80, 86, 87, 88, 89, 90, 91.(cont..)
	2nd	1.4 OH lines : Rule 74, 75, 76, 77, 78, 79, 80, 86, 87, 88, 89, 90, 91
	3rd	**2. ELECTRICAL INSTALLATIONS** 2. 1 Electrical installations, domestics, industrial, Wiring System, Internal distribution of Electrical Energy. Methods of wiring, systems of wiring, wire and cable, conductor materials used in cables, insulating materials mechanical protection. Types of cables used in internal wiring, multi-stranded cables, voltage grinding of cables, general specifications of cables. .(cont..)
	4th	2. 1 Electrical installations, domestics, industrial, Wiring System, Internal distribution of Electrical Energy. Methods of wiring, systems of wiring, wire and cable, conductor materials used in cables, insulating materials mechanical protection. Types of cables used in internal wiring, multi-stranded cables, voltage grinding of cables, general specifications of cables. .(cont..)
	5th	Tutorial
3rd	1st	2. 1 Electrical installations, domestics, industrial, Wiring System, Internal distribution of Electrical Energy. Methods of wiring, systems of wiring, wire and cable, conductor materials used in cables, insulating materials mechanical protection. Types of cables used in internal wiring, multi-stranded cables, voltage grinding of cables, general specifications of cables. .(cont..)

	2nd	2. 1 Electrical installations, domestics, industrial, Wiring System, Internal distribution of Electrical Energy. Methods of wiring, systems of wiring, wire and cable, conductor materials used in cables, insulating materials mechanical protection. Types of cables used in internal wiring, multi-stranded cables, voltage grinding of cables, general specifications of cables.
	3rd	2. 2 ACCESSORIES: Main switch and distribution boards, conduits, conduit accessories and fittings, lighting accessories and fittings, fuses, important definitions, determination of size of fuse – wire, fuse units. Earthing conductor, earthing, IS specifications regarding earthing of electrical installations, points to be earthed. Determination of size of earth wire and earth plate for domestic and industrial installations. Material required for GI pipe earthing(cont..)
	4th	2. 2 ACCESSORIES: Main switch and distribution boards, conduits, conduit accessories and fittings, lighting accessories and fittings, fuses, important definitions, determination of size of fuse – wire, fuse units. Earthing conductor, earthing, IS specifications regarding earthing of electrical installations, points to be earthed. Determination of size of earth wire and earth plate for domestic and industrial installations. Material required for GI pipe earthing(cont..)
	5th	Tutorial
4th	1st	2. 2 ACCESSORIES: Main switch and distribution boards, conduits, conduit accessories and fittings, lighting accessories and fittings, fuses, important definitions, determination of size of fuse – wire, fuse units. Earthing conductor, earthing, IS specifications regarding earthing of electrical installations, points to be earthed. Determination of size of earth wire and earth plate for domestic and industrial installations. Material required for GI pipe earthing(cont..)
	2nd	2. 2 ACCESSORIES: Main switch and distribution boards, conduits, conduit accessories and fittings, lighting accessories and fittings, fuses, important definitions, determination of size of fuse – wire, fuse units. Earthing conductor, earthing, IS specifications regarding earthing of electrical installations, points to be earthed. Determination of size of earth wire and earth plate for domestic and industrial installations. Material required for GI pipe earthing.
	3rd	2. 3 LIGHTING SCHEME: Aspects of good lighting services. Types of lighting schemes, design of lighting schemes, factory lighting, 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 sub-circuits. (cont..)
	4th	2. 3 LIGHTING SCHEME: Aspects of good lighting services. Types of lighting schemes, design of lighting schemes, factory lighting, 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 sub-circuits. (cont..)
	5th	Tutorial
5th	1st	2. 3 LIGHTING SCHEME: Aspects of good lighting services. Types of lighting schemes, design of lighting schemes, factory lighting,

		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 sub-circuits. (cont..)
	2nd	2. 3 LIGHTING SCHEME: Aspects of good lighting services. Types of lighting schemes, design of lighting schemes, factory lighting, 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 sub-circuits.
	3rd	**3. INTERNAL WIRING** 3 . 1 Type of internal wiring, cleat wiring, CTS wiring, wooden casing capping, metal sheathed wiring, conduit wiring, their advantage and disadvantages comparison and applications.(cont..)
	4th	3 . 1 Type of internal wiring, cleat wiring, CTS wiring, wooden casing capping, metal sheathed wiring, conduit wiring, their advantage and disadvantages comparison and applications.(cont..)
	5th	Tutorial
6th	1st	3 . 1 Type of internal wiring, cleat wiring, CTS wiring, wooden casing capping, metal sheathed wiring, conduit wiring, their advantage and disadvantages comparison and applications.
	2nd	3 . 2 Prepare one estimate of materials required for CTS wiring for small domestic installation of one room and one verandah within 25 m^2 with given light, fan & plug points.(cont..).
	3rd	3 . 2 Prepare one estimate of materials required for CTS wiring for small domestic installation of one room and one verandah within 25 m^2 with given light, fan & plug points.(cont..).
	4th	3 . 2 Prepare one estimate of materials required for CTS wiring for small domestic installation of one room and one verandah within 25 m^2 with given light, fan & plug points.
	5th	Tutorial
7th	1st	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.(cont..)
	2nd	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.
	3rd	3 . 4 Prepare one estimate of materials required for concealed wiring for domestic installation of two rooms and one latrine, bath, kitchen & verandah within 80m^2 with given light, fan & plug points. .(cont..)
	4th	3 . 4 Prepare one estimate of materials required for concealed wiring for domestic installation of two rooms and one latrine, bath, kitchen & verandah within 80m^2 with given light, fan & plug points.
	5th	Tutorial
8th	1st	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. .(cont..)
	2nd	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.
	3rd	**4. OVER HEAD INSTALLATION**

		4.1 Main components of overhead lines, line supports, factors Governing Height of pole, conductor materials, determination of size of conductor for overhead transmission line, cross arms, pole brackets and clamps, guys and stays, conductors configurations, spacing and clearances, span lengths, 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.(cont..)
	4th	4.1 Main components of overhead lines, line supports, factors Governing Height of pole, conductor materials, determination of size of conductor for overhead transmission line, cross arms, pole brackets and clamps, guys and stays, conductors configurations, spacing and clearances, span lengths, 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.(cont..)
	5th	Tutorial
9th	1st	4.1 Main components of overhead lines, line supports, factors Governing Height of pole, conductor materials, determination of size of conductor for overhead transmission line, cross arms, pole brackets and clamps, guys and stays, conductors configurations, spacing and clearances, span lengths, 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.(cont..)
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	3rd	4.2 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. .(cont..)
	4th	4.2 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. .(cont..)
	5th	Tutorial
10th	1st	4.2. 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	4.3. 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.
	3rd	4.3. 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.
	4th	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 involvingcalculation of the size of conductor (from conductor chart), current carryingcapacity and voltage regulation of the size of conductor (from conductor chart),current carrying capacity and voltage regulation consideration using ACSR. .(cont..)
	5th	Tutorial
11th	1st	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 involvingcalculation of the size of conductor (from conductor chart), current carryingcapacity and voltage regulation of the size of conductor (from conductor chart),current carrying capacity and voltage regulation consideration using ACSR. .(cont..)
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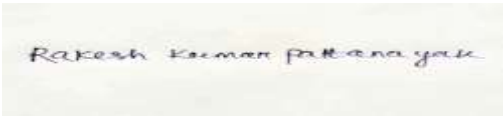
	3rd	**5. OVER HEAD SERVICE LINES** 5.1 Components of service lines, service line (cables and conductors), bearer wire,lacing rod. Ariel fuse, service support.(cont..)
	4th	5.1 Components of service lines, service line (cables and conductors), bearer wire,lacing rod. Ariel fuse, service support.(cont..)
	5th	Tutorial
12th	1st	5.1 Components of service lines, service line (cables and conductors), bearer wire,lacing rod. Ariel fuse, service support.
	2nd	5.2 Prepare and estimate for providing single phase supply of load of 5 KW (light,fan, socket) to a single stored residential building.(cont..)
	3rd	5.2 Prepare and estimate for providing single phase supply of load of 5 KW (light,fan, socket) to a single stored residential building.(cont..)
	4th	5.2 Prepare and estimate for providing single phase supply of load of 5 KW (light,fan, socket) to a single stored residential building.
	5th	Tutorial
13th	1st	5.3 Prepare and estimate for providing single phase supply load of 3KW to eachfloor of a double stored building having separate

		energy meter.(cont..)
	2nd	5.3 Prepare and estimate for providing single phase supply load of 3KW to eachfloor of a double stored building having separate energy meter
	3rd	5.4 Prepare one estimate of materials required for service connection to a factorybuilding with load within 15 KW using insulated wire.(cont..)
	4th	5.4 Prepare one estimate of materials required for service connection to a factorybuilding with load within 15 KW using insulated wire
	5th	Tutorial
14th	1st	5.5 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.(cont..)
	2nd	5.5 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
	3rd	**6. ESTIMATING FOR DISTRIBUTION SUBSTATIONS** 6.1 Prepare one materials estimate for following types of transformer substations.(cont..)
	4th	6.1 Prepare one materials estimate for following types of transformer substations
	5th	Tutorial
15th	1st	6.1.1 Pole mounted substation.(cont..)
	2nd	6.1.1 Pole mounted substation
	3rd	6.1.2 Plinth Mounted substation.(cont..)
	4th	6.1.2 Plinth Mounted substation
	5th	Tutorial



Signature of Teaching Faculty

ACADEMIC LESSON PLAN OF SUMMER 2024

Discipline **Electrical Engg.**	Semester: - **6th** **(Sec B)**	**Name of the Teaching Faculty: - Rakesh kumar Pattanayak**
Subject: **ELECTRICAL INSTALLATION AND ESTIMATING(TH-1)**	No. of days/per week class allotted : 4p/week Tutorial:1p/week	Semester From: 16th January 2024 to 26th April 2024
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	2nd	1.2 General safety precautions, rule 29, 30, 31, 32, 33, 34, 35, 36, 40, 41, 43, 44, 45, 46.
	3rd	1.3 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. .(cont..)
	4th	1.3 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	Tutorial
2nd	1st	1.4 OH lines : Rule 74, 75, 76, 77, 78, 79, 80, 86, 87, 88, 89, 90, 91.(cont..)
	2nd	1.4 OH lines : Rule 74, 75, 76, 77, 78, 79, 80, 86, 87, 88, 89, 90, 91
	3rd	**2. ELECTRICAL INSTALLATIONS** 2. 1 Electrical installations, domestics, industrial, Wiring System, Internal distribution of Electrical Energy. Methods of wiring, systems of wiring, wire and cable, conductor materials used in cables, insulating materials mechanical protection. Types of cables used in internal wiring, multi-stranded cables, voltage grinding of cables, general specifications of cables. .(cont..)
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	5th	Tutorial
3rd	1st	2. 1 Electrical installations, domestics, industrial, Wiring System, Internal distribution of Electrical Energy. Methods of wiring, systems of wiring, wire and cable, conductor materials used in

		cables, insulating materials mechanical protection. Types of cables used in internal wiring, multi-stranded cables, voltage grinding of cables, general specifications of cables. .(cont..)
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	3rd	2. 2 ACCESSORIES: Main switch and distribution boards, conduits, conduit accessories and fittings, lighting accessories and fittings, fuses, important definitions, determination of size of fuse – wire, fuse units. Earthing conductor, earthing, IS specifications regarding earthing of electrical installations, points to be earthed. Determination of size of earth wire and earth plate for domestic and industrial installations. Material required for GI pipe earthing(cont..)
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	5th	Tutorial
4th	1st	2. 2 ACCESSORIES: Main switch and distribution boards, conduits, conduit accessories and fittings, lighting accessories and fittings, fuses, important definitions, determination of size of fuse – wire, fuse units. Earthing conductor, earthing, IS specifications regarding earthing of electrical installations, points to be earthed. Determination of size of earth wire and earth plate for domestic and industrial installations. Material required for GI pipe earthing(cont..)
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	3rd	2. 3 LIGHTING SCHEME: Aspects of good lighting services. Types of lighting schemes, design of lighting schemes, factory lighting, 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 sub-circuits. (cont..)
	4th	2. 3 LIGHTING SCHEME: Aspects of good lighting services. Types of lighting schemes, design of lighting schemes, factory lighting, 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 sub-circuits. (cont..)

	5th	Tutorial
5th	1st	2. 3 LIGHTING SCHEME: Aspects of good lighting services. Types of lighting schemes, design of lighting schemes, factory lighting, 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 sub-circuits. (cont..)
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	3rd	**3. INTERNAL WIRING** 3 . 1 Type of internal wiring, cleat wiring, CTS wiring, wooden casing capping, metal sheathed wiring, conduit wiring, their advantage and disadvantages comparison and applications.(cont..)
	4th	3 . 1 Type of internal wiring, cleat wiring, CTS wiring, wooden casing capping, metal sheathed wiring, conduit wiring, their advantage and disadvantages comparison and applications.(cont..)
	5th	Tutorial
6th	1st	3 . 1 Type of internal wiring, cleat wiring, CTS wiring, wooden casing capping, metal sheathed wiring, conduit wiring, their advantage and disadvantages comparison and applications.
	2nd	3 . 2 Prepare one estimate of materials required for CTS wiring for small domestic installation of one room and one verandah within 25 m^2 with given light, fan & plug points.(cont..).
	3rd	3 . 2 Prepare one estimate of materials required for CTS wiring for small domestic installation of one room and one verandah within 25 m^2 with given light, fan & plug points.(cont..).
	4th	3 . 2 Prepare one estimate of materials required for CTS wiring for small domestic installation of one room and one verandah within 25 m^2 with given light, fan & plug points.
	5th	Tutorial
7th	1st	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.(cont..)
	2nd	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.
	3rd	3 . 4 Prepare one estimate of materials required for concealed wiring for domestic installation of two rooms and one latrine, bath, kitchen & verandah within 80m^2 with given light, fan & plug points. .(cont..)
	4th	3 . 4 Prepare one estimate of materials required for concealed wiring for domestic installation of two rooms and one latrine, bath, kitchen & verandah within 80m^2 with given light, fan & plug points.
	5th	Tutorial
8th	1st	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. .(cont..)
	2nd	3 . 5 Prepare one estimate of materials required for erection of

		conduct wiring to a small workshop installation about 30m2 and load within 10 KW.
	3rd	**4. OVER HEAD INSTALLATION** 4.1 Main components of overhead lines, line supports, factors Governing Height of pole, conductor materials, determination of size of conductor for overhead transmission line, cross arms, pole brackets and clamps, guys and stays, conductors configurations, spacing and clearances, span lengths, 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.(cont..)
	4th	4.1 Main components of overhead lines, line supports, factors Governing Height of pole, conductor materials, determination of size of conductor for overhead transmission line, cross arms, pole brackets and clamps, guys and stays, conductors configurations, spacing and clearances, span lengths, 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.(cont..)
	5th	Tutorial
9th	1st	4.1 Main components of overhead lines, line supports, factors Governing Height of pole, conductor materials, determination of size of conductor for overhead transmission line, cross arms, pole brackets and clamps, guys and stays, conductors configurations, spacing and clearances, span lengths, 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.(cont..)
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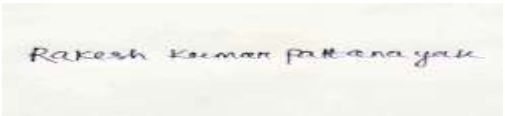
	3rd	4.2 Prepare an estimate of materials required for LT distribution line within load of 100 KW maximum and standard spans involving calculation of the size of conductor (from conductor chart), current carrying capacity and voltage regulation consideration using ACSR. .(cont..)
	4th	4.2 Prepare an estimate 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. .(cont..)
	5th	Tutorial
10th	1st	4.2. 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	4.3. 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.
	3rd	4.3. 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.
	4th	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 involvingcalculation of the size of conductor (from conductor chart), current carryingcapacity and voltage regulation of the size of conductor (from conductor chart),current carrying capacity and voltage regulation consideration using ACSR. .(cont..)
	5th	Tutorial
11th	1st	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 involvingcalculation of the size of conductor (from conductor chart), current carryingcapacity and voltage regulation of the size of conductor (from conductor chart),current carrying capacity and voltage regulation consideration using ACSR. .(cont..)
	2nd	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 involvingcalculation of the size of conductor (from conductor chart), current carryingcapacity and voltage regulation of the size of conductor (from conductor chart),current carrying capacity and voltage regulation consideration using ACSR.
	3rd	**5. OVER HEAD SERVICE LINES** 5.1 Components of service lines, service line (cables and conductors), bearer wire,lacing rod. Ariel fuse, service support.(cont..)
	4th	5.1 Components of service lines, service line (cables and conductors), bearer wire,lacing rod. Ariel fuse, service support.(cont..)
	5th	Tutorial
12th	1st	5.1 Components of service lines, service line (cables and conductors), bearer wire,lacing rod. Ariel fuse, service support.
	2nd	5.2 Prepare and estimate for providing single phase supply of load of 5 KW (light,fan, socket) to a single stored residential building.(cont..)
	3rd	5.2 Prepare and estimate for providing single phase supply of load of 5 KW (light,fan, socket) to a single stored residential building.(cont..)
	4th	5.2 Prepare and estimate for providing single phase supply of load of

		5 KW (light,fan, socket) to a single stored residential building.
	5th	Tutorial
13th	1st	5.3 Prepare and estimate for providing single phase supply load of 3KW to eachfloor of a double stored building having separate energy meter.(cont..)
	2nd	5.3 Prepare and estimate for providing single phase supply load of 3KW to eachfloor of a double stored building having separate energy meter
	3rd	5.4 Prepare one estimate of materials required for service connection to a factorybuilding with load within 15 KW using insulated wire.(cont..)
	4th	5.4 Prepare one estimate of materials required for service connection to a factorybuilding with load within 15 KW using insulated wire
	5th	Tutorial
14th	1st	5.5 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.(cont..)
	2nd	5.5 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
	3rd	**6. ESTIMATING FOR DISTRIBUTION SUBSTATIONS** 6.1 Prepare one materials estimate for following types of transformer substations.(cont..)
	4th	6.1 Prepare one materials estimate for following types of transformer substations
	5th	Tutorial
15th (Extra class)	1st	6.1.1 Pole mounted substation.(cont..)
	2nd	6.1.1 Pole mounted substation
	3rd	6.1.2 Plinth Mounted substation.(cont..)
	4th	6.1.2 Plinth Mounted substation
	5th	Tutorial



Signature of Teaching Faculty