(Electrical Machnie-I)

Name of Faculty: Mr. Naveen Kumar

Discipline **Electrical Engineering**

Semester **4th** **:**

Subject **Electrical Machine-I**

Lesson plan duration: 15 weeks (from January 18 to April 18)

Work Load(Lecture/Practical) per week : Lectures-04, Practicals-03

Week	Theory		Practical	
	Lecture Day	Topic(including assignment/test)	Practical day	Topic
1st	1	• Will Discuss Learning outcomes of Electrical Machine subject.	1st	• Introduction of EM lab various specifications of Motors, safety precautions etc.
	2st	• Introduction to Electrical Machines		
		• Definition of motor and generator, concept of torque		
	3rd	• Electro-magnetically induced emf.		
	4th	• Torque development due to alignment of two fields and the concept of torque angle		
2nd	5th	• Elementary concept of an electrical machine	2nd	Measurement of the angular displacement of the rotor of a slip-ring induction motor on application of DC to stator of motor winding in sequence and simultaneously to each phase of rotor winding
	6th	• Comparison of generator and motor		
	7th(Unit-II)	• Introduction of DC machines, its types		
	8th	• Construction of DC machines		
3rd	9th	• Armature winding and its types	3rd	Speed control of dc shunt motor
	10th	• Commutator and its function for generator and motor action		(i) Armature control method
	11th	• Factors determining induced EMF		(ii) Field control method
	12th	• Factors determining electromagnetic torque		
4th	13th	• DC generator and its types	4th	Evaluation of above practical's.
	14th	• Voltage buildup in DC gen.		
	15th	• Back emf, its significance , relationship between terminal voltage and back emf		
	16th	• Armature reaction		
5th	17th	• Commutation methods to improve commutation	5th	Study of dc series motor with starter (to operate the motor on no load for a moment)
	18th	• Types of DC Motors, its performace, Characteristic of DC motors		

	19th	• Speed control of DC motors, starters for DC motors(3 point and 4 point)		
	20th	• Application of DC Motors, losses in DC machines		
6th	21th	• Swinburne's test to find out losses	6th	Study of 3 point starter for starting D.C. shunt motor.
		• First assignment will be given and tentative 1st sessional test/evaluation of sessional marks etc.		
	22th	• Display and analysis of sessional marks		
	23th(unit-3)	• Introduction of Transformers, types of T/Fm		
	24th	• Construction of single phase transformer,		
7th	25th	• Parts of a transformer	7th	To perform open circuit and short circuit test for determining: (i) equivalent circuit (ii) the regulation and(iii)efficiencyof a
	26th	• Working principle of transformer		
	27th	• EMF equation of T/fm		
	28th	• Transformer at no load and its phasor diagram		
8th	29th	• Transformer – neglecting voltage drop in the windings – Ampere turn balance – its phasor diagram	8th	Evaluation of above practicals.
	30th	• Mutual and leakage fluxes, leakage reactance		
	31th	• Transformer on load, voltage drops and its phasor diagram		
	32th	• Equivalent circuit diagrams of T/fm, Relation between induced emf and terminal voltage, regulation of a transformer mathematical relation		
9th	33th	• Losses in transformer, various tests OC/SC Test to find out these losses and efficiency etc.	9th	Revision of above practicals for left out students.
	34th	• Auto transformer, construction,working and its application		
	35th	• Different type of transformer including dry type transformer		
	36th	• second assignment will be given and tentative 2nd sessional test/evaluation of sessional marks etc		
10th	37th	• display and analysis of sessional marks.	10th	Checking the polarity of the windings of a three phase transformer and connecting the windings in various configurations
	38th (unit-4)	• construction of 3-phase transformer		
	39th	• accessories of transformers such as Conservator, breather,		
	40th	• BuchholzRelay, Tap Changer (off load and on load) (Brief idea)		
11th	41th	• Types of three phase transformer i.e. delta-delta, delta-star	11th	Finding the voltage and current relationships of primary and secondary of a three phase transformer under balanced load in various configurations conditions such as (a) Star-star (b) Star delta (c) Delta star (d)
	42th	• ..star-delta,star-star.		
	43th	• Parallel operation of transformer, its need		
	44th	• Parallel operation conditions will be discussed		

12th	45th	• Any left out topic due to Cl/leave etc.	12th	Evaluation of above practicals.
	46th	• On load/off load tap changer		
13th	47th	• Distribution /power transformer	13th	Revision of above practicals for left out students if any.
	48th	• Cooling of transformer		
	49th	• 3rd assignment will be given		
	50th	• Previous state boards question will be carried out, any other left out topic		
14th	51th	• 3rd sessional test	14th	Viva-voce/preparation of practical sessional marks.
	52th	• Evaluation of 3rd test		
15th	53th	• Display/analysis of 3rd sessional test		

Name of Faculty : Mr. Navneet Singh
Discipline : Electrical
Semester : 4th sem
Subject : Electronics-II
Lesson Plan Duration : 15 weeks(from jan 2018 to april 2018)
Work Load (lecture/practical)per week (in hours) : Lectures- 04, practical- 03

Week	Theory		Practical	
	Lecture Day	Topic(including assignment/test)	Practical Day	Practical Topic
1	1(unit 1)	Difference between voltage and power	1	Plot frequency response of two stage RC copled amplifier
	2	collector efficiency, distortion and dissipation	2	Plot frequency response of two stage RC copled amplifier
	3	Explanation of Class A amplifier	3	Plot frequency response of two stage RC copled amplifier
	4	Explanation of Class B amplifier	4	Plot frequency response of two stage RC copled amplifier
2		Explanation of Class C amplifier	5	Measure optimum load and power of a push pull amplifier
	5	Working of Class A single ended amplifier	6	Measure optimum load and power of a push pull amplifier
		Impedence matching in power amplifier using	7	Measure optimum load and power of a push pull amplifier
	8	Heat sink in power amplifier	8	Measure optimum load and power of a push pull amplifier
3	9	Working and advantages of push pull amplifier	9	Observe voltage gainof transistor amplifier by removing
	10	Working of complementary symmetry	10	Observe voltage gainof transistor amplifier by removing
	11	Revision of previous topics	11	Observe voltage gainof transistor amplifier by removing
	12	Assignment of classification of power	12	Observe voltage gainof transistor amplifier by removing
4	13(unit2)	Introduction of tuned voltage amplifier	13	Measure voltage gain of emitter follower circuit
	14	Series Resonance and parallel Resonance	14	Measure voltage gain of emitter follower circuit
	15	Working of single tuned voltage amplifier	15	Measure voltage gain of emitter follower circuit
	16	Working of double tuned voltage amplifier	16	Measure voltage gain of emitter follower circuit
5	17	Frequency response of tuned voltge amplifier	17	Viva-voice of previous practicals

	18	Application of tuned voltage amplifier	18	Viva-voice of previous practicals
	19	Revision of previous topics	19	Viva-voice of previous practicals
	20	test of previous chapters	20	Viva-voice of previous practicals
6	21(unit 3	Feedback, positive and negative feedback	21	Measure frequency generation in hartley and R-C phase shift
	22	Voltage gain of amplifier using negative feedback	22	Measure frequency generation in hartley and R-C phase shift
	23	Effect of negative feedback on voltage gain,	23	Measure frequency generation in hartley and R-C phase shift
	24	Effect of emitter by pass capacitor on CE transistor	24	Measure frequency generation in hartley and R-C phase shift
7	25	Emitter Follower and its applications	25	Differentiated and integrated square wave on CRO
	26(unit 4	Sinusoidal Oscillator and positive feedback in	26	Differentiated and integrated square wave on CRO
	27	Difference between oscilator and alternator	27	Differentiated and integrated square wave on CRO
	28	Essential of an oscillator	28	Differentiated and integrated square wave on CRO
8	29	Working of tuned collector oscillator	29	Observe waveshape of clipping circuit
	30	Hartley and colpitt's oscillator	30	Observe waveshape of clipping circuit
	31	R-C phase shift and Wein bridge oscillator	31	Observe waveshape of clipping circuit
	32	Piezoelectric and crystal oscillator	32	Observe waveshape of clipping circuit
9	33(unit 5	Concept of waveshaping	33	Observe waveshape of clamping circuit
	34	R-C differentiating and integrating circuits	34	Observe waveshape of clamping circuit
	35	Diode clipping circuit	35	Observe waveshape of clamping circuit
	36	Diode clamping circuit	36	Observe waveshape of clamping circuit
10	37	Application of wave-shaping circuit	37	Observe square wave of astable multivibrator on CRO
	38	Transistor as a switch	38	Observe square wave of astable multivibrator on CRO
	39	Working of bistable multivibrator	39	Observe square wave of astable multivibrator on CRO
	40	Working of monostabletable	40	Observe square wave of astable multivibrator on CRO

11	41	Working of astable multivibrator	41	Observe square wave of Bistable multivibrator on CRO
	42	Revision of previous topics	42	Observe square wave of Bistable multivibrator on CRO
	43	Revision of previous topics	43	Observe square wave of Bistable multivibrator on CRO
	44	Test of previous chapters	44	Observe square wave of Bistable multivibrator on CRO
12	45(unit 6	Working of CVT	45	Viva-voice of previous practicals
	46	Working of IC voltage rgulator (78XX/79XX)	46	Viva-voice of previous practicals
	47(unit 7	Intoduction of basic of operational amplifier	47	Viva-voice of previous practicals
	48	Differential amlifier	48	Viva-voice of previous practicals
13	49	Emitter coupled differential amplifier	49	Application performed using operational amplifier
	50	Offset even voltages and current	50	Application performed using operational amplifier
	51	Operational amplifier as integrator	51	Application performed using operational amplifier
	52	Operational amplifier as differentiator	52	Application performed using operational amplifier
14	53	Operational amplifier as summer and subtractor	53	Study of 555 IC as monostable and astable multivibrator
	54	Pin configuration of 741 IC	54	Study of 555 IC as monostable and astable multivibrator
	55	Assignment of important very short answer	55	Study of 555 IC as monostable and astable multivibrator
	56	Block diagram of 555 IC timer	56	Study of 555 IC as monostable and astable multivibrator
15	57	Revision of previous topics	57	Viva-voice of all practicals
	58	Revision of previous topics	58	Viva-voice of all practicals
	59	Test of previous chapters	59	Viva-voice of all practicals
	60	Revision of all syllabus	60	Viva-voice of all practicals

Lecturer Plan

Name of the Faculty Ms. Renuka Sharma
Discipline ELECTRICAL ENGG.
Semester 4th
Subject INSTRUMENTATION
Lesson Plan Duration 15 weeks(from January, 2018 to April,2018)
Work Load(Lecture/Practical) per week (in hours): Lectures-03, Practicals - 02

Week	**Theory**		**Practicals**	
	Lecture Day	**Topic (inculding**	**Practical Day**	**Topic**
1st	1st	**Unit 1 : Measurement :** Introduction and	1st	Measurement of Level of Liquid
	2nd	Basic Measuring systems , Their advantages and	2nd	Measurement of Level of Liquid
	3rd	Display Devices		
2nd	4th	**Unit 2 : Transducer :** Classifications of	3rd	Temperature measurement using Thermocouple
	5th	Resistance Transducer	4th	Temperature measurement using Thermocouple
	6th	Inductance Transducer		
3rd	7th	Capacitance Transducer	5th	Study and use of Digital Temperature controller
	8th	Electromagnetic Transducer	6th	Study and use of Digital Temperature controller
	9th	Piezo electrical Transducer		
4th	10th	**Unit 3 measurement of Displacement and Strain :**	7th	Use of Thermistor in ON/OFF Transducer
	11th	Wire wound potentiometer	8th	Use of Thermistor in ON/OFF Transducer
	12th	LVDT		
5th	13th	Strain Guages and their types resistance type	9th	Study of Variable Capacitive transducer
	14th	Wire and Foil Type	10th	Study of Variable Capacitive transducer
	15th	Gauge Factor , Guage Material		
6th	16th	Selection of Guage Material	11th	Draw the characteristics of Potentiometer
	17th	Use of electrical Strain Guage	12th	Draw the characteristics of Potentiometer

	18th	Strain Guage Bridges and amplifier		
7th	19th	**Unit 4 Force and Torque Measurement :** Force	13th	To measure Linear Displacement using LVDT
	20th	Elastic Transducer	14th	To measure Linear Displacement using LVDT
	21st	Electrical Strain Guage		
8th	22nd	Load Cell	15th	To study the use of Electrical strain Guage
	23rd	Measurement of torque by Brake method	16th	To study the use of Electrical strain Guage
	24th	Dynamometer method		
9th	25th	Electrical Strain Guage	17th	To study weighing machine using load cell
	26th	Speed Measurement	18th	To study weighing machine using load cell
	27th	Digital Methods		
10th	28th	**Unit 5 Pressure Measurement :** Bourdon	19th	To study pH meter
	29th	Bellows and Diaphragms	20th	To study pH meter
	30th	Secondary Transducers		
11th	31st	Measurement of Low Pressure	21th	Revision Experiment 1-2
	32nd	Use of Pressure Cell	22nd	Revision Experiment 1-2
	33rd	**Unit 6 Flow Measurement**		
12th	34th	Doppler shift ultrasonic Method	23rd	Revision Experiment 3-4
	35th	Transit Time ultrasonic method	24th	Revision Experiment 3-4
	36th	**Unit 7 Measurement of Temperature** Bimetallic		
13th	37th	Thermoelectric Thermometer	25th	Revision Experiment 5-6
	38th	RTD	26th	Revision Experiment 5-6
	39th	Thermocouple		
14th	40th	Thermister and Pyrometer	27th	Revision Experiment 7-8

	41st	Temperature Recorder	28th	Revision Experiment 7-8
	42nd	**Unit 8 Measurement of other Non Electrical**		
15th	43rd	pH	29th	Revision Experiment 9-10
	44th	Level	30th	Revision Experiment 9-10
	45th	Vibration		

LECTURER PLAN

Mr. Parvinder Singh

Name of the Faculty

Discipline Electrical Engineering

Semester 4th

Subject ESMEE

Lesson Plan Duration : 15 weeks(from January, 2018 to April,2018)

		Theory
Week	**Lecture Day**	**Topic (inculding assignment/test)**
1st	1st	Various energy sources
	2nd	Importance of non conventional sources of energy,
	3rd	Present scenario, future prospects and economic criteria
	4th	Revision.
2nd	5th	Solar Energy:Principle of conversion of solar radiation into heat
	6th	Photo-voltaic cell
	7th	Photo-voltaic cell
	8th	Revision
3rd	9th	Electricity generation
	10th	Application of solar energy like solar water heaters,
	11th	Solar furnaces
	12th	Revision
4th	13st	Solar cookers
	14th	Solar lighting
	15th	Solar pumping.
	16th	Revision
5th	17th	Bio-energy:Bio-mass conversion technologies- wet and dry processes
	18th	Bio-energy:Bio-mass conversion technologies- wet and dry processes

	19th	Bio-energy:Bio-mass conversion technologies- wet and dry processes
	20th	Revision
6th	21th	Methods for obtaining energy from biomass
	22th	Power generation by using gasifiers
	23th	Power generation by using gasifiers
	24th	Revision
7th	25th	Wind Energy:Wind energy conversion
	26th	Windmills,
	27th	Electricity generation from wind- types of wind mills
	28th	Revision
8th	29th	Electricity generation from wind- types of wind mills
	30th	Local control, energy storage
	31st	Local control, energy storage
	32nd	Revision
9th	33rd	Geo-thermal and Tidal Energy:Geo-thermal sources
	34th	Ocean thermal electric conversion,
	35th	Open and closed cycles,
	36th	Revision
10th	37th	Open and closed cycles,
	38th	Hybrid cycles
	39th	Prime movers for geo-thermal energy conversion
	40th	Steam Generation and electricity generation.
11th	41th	Magneto Hydro Dynamic (MHD) Power Generation
	42th	Magneto Hydro Dynamic (MHD) Power Generation
	43th	Magneto Hydro Dynamic (MHD) Power Generation

	44th	Revision
12th	45th	Chemical Energy Sources:,Design and operating principles of a fuel cell
	46th	Conversion efficiency,
	47th	Work output and e.m.f of fuel cells,
	48th	Applications
13th	49th	Energy Conservation and Management
	50th	Need for energy conservation with brief description of oil and coal crisis.
	51st	Environmental aspects
	52nd	Energy efficiency- its significance
14th	53rd	Energy efficient technology an overview
	54th	Energy conservation in Domestic sector- Lighting, home appliances
	55th	Energy conservation in Domestic sector- Lighting, home appliances
	56th	Need for energy efficient devices
15th	57th	Energy conservation in Industrial sector- Motors, Industrial lighting, Distribution system, Pumps, Fans,
	58th	Energy conservation in Agriculture sector, Tube-well pumps, diesel-generating sets, Standby energy sources.
	59th	Macro Level approach for energy conservation at design stage.
	60th	Revision

LECTURER PLAN

Name of the Faculty:	Ms. Renuka Sharma
Discipline:	Electrical engg.
Semester:	4th
Subject:	Estimating & Costing in Electrical Engg.
Lesson Plan Duration: 15 weeks (from January, 2018 to April2018)	
**Work Load (Lecture/Practical) per week (in hours): Lectures-04, Practicals-00	

Week	Theory	
	Lecture day	**Topic(including assignment/test)**
1st	**1st**	• Will Discuss Learning outcomes of Estimating & Costing in Electrical Engg.
		• Introduction to complete syllabus of Estimating & Costing in Electrical Engg.
	2nd	**Unit-1: Purpose of estimating and costing,**
		• Proforma for making estimates,
		• Preparation of materials schedule
	3rd	• Costing, price list,
		• Preparation of tender document
	4th	• Net price list,
		• Market survey,
2nd	**1st**	• Overhead charges,
		• Labour charges,
	2nd	• Electrical point method and fixed percentage method,
		• contingency,
	3rd	• Profit,
		• purchase system,
	4th	• Enquiries,
		• Eomparative statements

3rd	**1st**	• Payment of bills.
		• Orders for supply
	2nd	• Tenders – its constituents, finalization,
		• Specimen tender.
	3rd	**Unit-2: Types of wiring:**
		• Cleat, batten, wiring,
	4th	• casing capping and
		• conduit wiring,
4th	**1st**	• Comparison of different wiring systems.
	2nd	• Design of wiring schemes for particular situation of domestic installation.
	3rd	• Design of wiring schemes for particular situation Industrial Installation.
	4th	• Selection of wires and cables,
5th	**1st**	• Wiring accessories used for Electrical Installation
	2nd	• Use of protective devices i.e. MCB, ELCB etc.
	3rd	• Use of wire-gauge and tables (to be prepared/arranged)
	4th	• Revision/ queries of unit-1,2 ;
		• First assignment will be given
6th	**1st**	• Assignment –I check
		• Tentative 1st sessional test
		• Evaluation of sessional marks etc.
	2nd	• Assignment –I check
		• Tentative 1st sessional test
		• Evaluation of sessional marks etc.
	3rd	• Display and analysis of sessional marks
	4th	**Unit-3 Estimating &costing:** **3.1 Domestic installations;**
		• description of various tests to test the wiring installation before commissioning,
7th	**1st**	• Standard practice as per IS and IE rules.
		• Planning of circuits, sub circuits.

	2nd	• Position of different accessories,
		• Electrical layout of Domestic Installation
	3rd	• Preparing estimates including cost as per schedule rate pattern and actual market rate (for house of two room set along with layout sketch)
	4th	**3.2 Industrial installations;**
		• Relevant IE rules and IS standard practices,
8th	**1st**	• Planning of installation for single phase motors of different rating
		• designing for single phase motors of different ratings
	2nd	• Estimation of installation for single phase motors of different ratings
		• Electrical circuit diagram for Industrial installations ,
	3rd	• Starters for Industrial installations.
		• Preparation of list of materials for Industrial installations,
	4th	• Estimating and costing exercises on workshop with singe-phase motor load
9th	**1st**	• Estimating and costing exercises on workshop with 3-phase motor load and the light load (3-phase supply system)
	2nd	**3.3** Service line connections estimate for domestic upto 10 KW from pole to energy meter.
	3rd	• Service line connections estimate for Industrial loads upto 20 KW over-head connection from pole to energy meter.
	4th	• Service line connections estimate for Industrial loads upto 20 KW underground connections from pole to energy meter.
		• Second assignment will be given
10th	**1st**	• Revision/ queries of unit-3
	2nd	• Assignment –II check
		• Tentative 2nd sessional test
		• Evaluation of sessional marks etc.
	3rd	• Assignment –II check
		• Tentative 2nd sessional test
		• Evaluation of sessional marks etc.
	4th	• Display and analysis of sessional marks
11th	**1st**	**Unit-4 :-Estimating the material required 4(a):**
		• Transmission and distribution lines overhead planning and designing of lines with different fixtures based on unit cost

	2nd	• Transmission and distribution lines overhead planning and designing of earthing etc.
	3rd	• Transmission and distribution lines underground planning and designing of lines with different fixtures, based on unit cost
	4th	• Transmission and distribution lines underground planning and designing of lines with earthing etc.
12th	**1st**	**4(b) Substation:**
		• Types of substations,
		• substation schemes and components
	2nd	• Estimate of 11/0.4 KV pole mounted substation up to 200 KVA rating
	3rd	• Methods of earthing of substations,
		• Key Diagram of 66 KV/11KV
	4th	• Key Diagram of 11 KV/0.4 KV Substation
13th	**1st**	• Single line diagram, layout sketching of outdoor, indoor 11kV sub-station
	2nd	• Single line diagram, layout sketching of outdoor, indoor 11kV sub-station
	3rd	• Single line diagram, layout sketching of outdoor, indoor 33kV substation
	4th	• Single line diagram, layout sketching of outdoor, indoor 33kV substation
14th	**1st**	• 3rd assignment will be given
		• Revision/ queries of unit-4
	2nd	• Assignment –III check
		• Tentative 3rd sessional test
		• Evaluation of sessional marks etc.
	3rd	• Assignment –III check
		• Tentative 3rd sessional test
		• Evaluation of sessional marks etc
	4th	• Display/analysis of 3rd sessional test
15th	**1st**	• Remedial will be taken if any shortcomings found
		• Previous state boards question will be carried out, any other left out topic
	2nd	• Seminal/group discussion as per evaluation scheme
	3rd	• Seminal/group discussion as per evaluation scheme
	4th	• Seminal/group discussion as per evaluation scheme

LECTURER PLAN

Name of the Faculty Mr. Jagdep Singh
Discipline ELECTRICAL ENGG.
Semester 4TH
Subject ELECTRICAL ENGINEERING DESIGN & DRAWING-II

Lesson Plan Duration 15 weeks(from January, 2018 to April,2018)
Work Load (Lecture/Practical) per week (in periods): Lectures-Nil, Practicals- 06

Week		Drawings
	Practical Periods	Topic (inculding test)
1st	1st	Introduction of Electrical Engg. Design. & Drawing.
	2nd	Unit 1 : (Contractor Control circuits) - To make the drawing
	3rd	sheet (Shemetic diagram and power wiring diagram of DOL
	4th	Unit 1 : (Contractor Control circuits) - To make the drawing
	5th	sheet (Shemetic diagram and power wiring diagram of 3-
	6th	phase induction motor getting supply selected feeder.
2nd	7th	Unit 1 : (Contractor Control circuits) - To make the drawing
	8th	sheet (Shemetic diagram and power wiring diagram of
	9th	Forwarding/ reversing of a 3-phase induction motor.
	10th	
	11th	Revision of previous making drawing sheets for left out
	12th	students if any and checking of making drawing sheets
3rd	13th	Unit 1 : (Contractor Control circuits) - To make the drawing
	14th	sheet (Shemetic diagram and power wiring diagram of Two
	15th	speed control of 3-phase induction motor.
	16th	Unit 1 : (Contractor Control circuits) - To make the drawing
	17th	sheet (Shemetic diagram and power wiring diagram of Limit
	18th	switch control of a 3-phase induction motor.
4th	19th	Unit 1 : (Contractor Control circuits) - To make the drawing
	20th	sheet (Shemetic diagram and power wiring diagram of
	21st	Sequential operating of two motors using time delay relay.
	22nd	Unit 1 : (Contractor Control circuits) - To make the drawing
	23rd	sheet (Shemetic diagram and power wiring diagram of
	24th	Manually generated star delta starter for 3-phase induction
5th	25th	Unit 1 : (Contractor Control circuits) - To make the drawing
	26th	sheet (Shemetic diagram and power wiring diagram of
	27th	Automatic star delta starter for 3-phase induction motor.
	28th	
	29th	Class test for preparation of Ist sessional exam and checking of
	30th	previous drawing sheets.
6th	31st	
	32nd	
	33rd	Unit 2 : (Earthing) - Concept and purpose of earthing.
	34th	
	35th	Unit 2 : (Earthing) - Different types of earthing : To make the
	36th	drawing sheet of plate earthing.
7th	37th	
	38th	Unit 2 : (Earthing) - To make the drawing sheet of Pipe
	39th	earthing.
	40th	
	41st	Unit 2 : (Earthing) - Revision of previous making drawing
	42nd	sheets and check the making drawing sheets.

8th	43rd	
	44th	Unit 2 : (Earthing) - Procedure of earthing, test of materials
	45th	required and costing and method of reducing earth resistance.
	46th	
	47th	Unit 2 : (Earthing) - Relevant IS specifications of earth
	48th	electrode for earthing a transformer, a high building.
9th	49th	
	50th	Unit 2 : (Earthing) - Earthing layout of distribution
	51st	transformer.
	52nd	
	53rd	Unit 2 : (Earthing) - Substation earthing layout and earthing
	54th	materials and key diagram of 11KV sub station.
10th	55th	
	56th	
	57th	Unit 2 : (Earthing) - Key diagram of 33KV, 66KV sub stations.
	58th	
	59th	Unit 2 : (Earthing) - Key diagram of 132KV sub station and
	60th	preparation of IInd sessional exam.
11th	61st	
	62nd	Unit 3 : (Drawing and Machine Parts) : End cover of induction
	63rd	moter.
	64th	
	65th	Unit 3 : (Drawing and Machine Parts) : Rotor of a squirrel cage
	66th	induction motor.
12th	67th	
	68th	Unit 3 : (Drawing and Machine Parts) : Revision of End cover,
	69th	Rotor of a squirrel cage induction motor.
	70th	
	71st	Unit 3 : (Drawing and Machine Parts) : Field coil of a DC
	72nd	motor.
13th	73rd	
	74th	Unit 3 : (Drawing and Machine Parts) : Terminal plate of an
	75th	induction motor.
	76th	
	77th	Unit 3 : (Drawing and Machine Parts) : Motor body (Induction
	78th	motor) as per IS specifications.
14th	79th	
	80th	Unit 3 : (Drawing and Machine Parts) : Revision of above
	81st	three drawing sheets for left out students (in any).
	82nd	Unit 3 : (Drawing and Machine Parts) :Sliprings of 3-phase
	83rd	induction motor.
	84th	
15th	85th	Preparation of IIIrd sessional exam and checking of previous
	86th	drawing sheets (If any)
	87th	
	88th	Revision of all above making drawing sheets and preparation
	89th	of final Exam.
	90th	