Syllabus for the Trade of "Wireman" Duration : Six Months

First Semester

Semester Code: WM: SEM I

Week No.	Trade Practical	Trade Theory
1	Implementation in the shop floor of the various safety measures. Visit to the different sections of the Institute. Demonstration on elementary first aid. Artificial Respiration Practice on use of fire extinguishers.	Occupational Safety and Health Basic safety introduction, Personal protection. Basic injury prevention, Basic first aid, Hazard identification and avoidance, safety signs for Danger, Warning, caution and personal safety message. Use of Fire extinguishers. Visit and observation of sections. Various safety measures involved in the Industry. Elementary first Aid. Concept of Standard.
2	Demonstration of Trade hand tools. Identification of simple types- screws, nuts & bolts, chassis, clamps, rivets etc. Use, care and maintenance of various hand tools.	Identification of Trade-Hand tools- Specifications
3	Practice in using cutting pliers, screw drivers, etc. skinning the cables and joint practice on single strand.	Fundamental of electricity. Electron theory- free electron, Fundamental terms, definitions, units and effects of electric current Explanation, Definition and properties of conductors, insulators and semi-conductors

	Demonstration and Practice on bare conductors joints such as Britannia, straight, Tee, Western union Joints	Wires/cable & its specification. Types of wire joint & use.
4	Practice on soldering- Measurement of Resistance. Determination of specific Resistance.	Solders, flux and soldering technique. Types & properties of resistors Specific Resistance.
5 - 6	 Verification of Ohm's Law, Verification of Kirchhoff's Laws. Verification of series and parallel circuits. Verification of open circuit and closed circuit network. Measuring unknown resistance using different methods- a) Using Wheatstone Bridge b) By voltage drop method. Experiment to demonstrate the variation of resistance of a metal with the change in 	 Ohm's Law - Simple electrical circuits and problems. Resistors -Law of Resistance. Series and parallel circuits. Kirchhoff's Laws and applications. Wheatstone bridge principle and its applications. Effect of variation of temperature on resistance. Different methods of measuring the values of resistance.
7	Demonstration and identification of types of cables. Demonstration and practice on using standard wire gauge & micrometre. Practice on crimping thimbles, Lugs.	Introduction of National Electrical Code Voltage grading of different types of Insulators, Temp. Rise permissible. Types of wires and cables standard wire gauge. Specification of wires and Cables-insulation and voltage grades -Low , medium and high voltage Precautions in using various types of cables / Ferrules
8-10	Grouping of Dry cells for a specified voltage and current. Practice on Battery Charging, Preparation of battery charging, Testing of cells, Installation of batteries, Charging of batteries by different methods.	Chemical effect of electric current- Principle of electrolysis. Faraday's Law of electrolysis. Basic principles of Electroplating and Electro chemical equivalents. Explanation of Anodes and Cathodes.

	Charging of a Lead acid	Cells - Primary & Secondary
	checking of discharged and fully charged battery	charging-Precautions to be taken & testing
	Care and maintenance of Batteries	equinment
	our e una maintenance or batteries	Ni-cadmium & Lithium cell Cathodic
		protection
		Electronlating Anodising
		Different types of lead acid cells.
		Application of battery/cell in Inverter. Battery
		Charger, UPS, etc.
		Lead Acid cell, general defects and
		remedies.
		Nickel Alkali Cell-description charging.
		Power and capacity of cells. Efficiency of cells.
		Rechargeable dry cell, description
		advantages and disadvantages.
		Care and maintenance of cells
		Grouping of cells of specified voltage and
		current, Sealed Maintenance free Batteries, Solar
		battery.
11-12	ALLIED TRADES:	Introduction of fitting trade.
	Use of chisels and hacksaw on flats, sheet metal	Safety precautions to be observed.
	filing practice, filing true to line.	Description of files, hammers, chisels
	Sawing and planning practice. Practice in using	hacksaw frames & blades, punch, etc- their
	firmer chisel and preparing simple half lap joint.	specification and grades. Care and maintenance of
		steel rule, try square and files. Marking tools
		description and use. Description of carpenter's
		common nand tools such as saws planes, chisels
		holding tools their care and maintenance
10		
13	Drilling practice in hand drilling and power	Types of arills description and arilling machines,
	Crinding prostice	proper use, care and maintenance. Description of
	Grantice in using tang and diag, threading	taps and dies, types of rivets and riveted joints.
	hovegonal and square puts at scutting external	ose of uneau gauge.
	throads on stud and on pinos riveting practice	
	uneaus on stud and on pipes, riveting practice	

14	Practice in using snips, marking and cutting of straight and curved pieces in sheet metals. Bending the edges of sheets metals. Riveting practice in sheet metal. Practice in making different joints in sheet metal in soldering the joints.	Description of marking and cutting tools such as snubs shears punches and other tools like hammers, mallets, etc. used by sheet metal workers. Different types soldering materials, fluxes and process. Types of different soldering irons and their proper uses. Use of different bench tools used by sheet metal worker.
15	Identification and use of wiring accessories Practice on installation and overhauling common electrical accessories. Fixing of switches, holder plugs etc. in wooden/PVC/ Metallic boards.	Common Electrical wiring Accessories, their specifications in line with NEC - Explanation of switches, lamp holders, plugs and sockets. Developments of domestic circuits, Alarm & switches. Use & specification of Fire alarm, MCB, ELCB, MCCB.
16-17	Trace the magnetic field. Prepare Electromagnet. Use of magnetic compass. Assembly / winding of a simple electro magnet Identification of different types of Capacitors. Charging and discharging of capacitor, Testing of Capacitors using DC voltage and lamp.	Magnetism - classification of magnets, methods of magnetising, magnetic materials. Properties, care and maintenance, methods of magnetising magnetic materials. Para and Diamagnetism and Ferro magnetic materials. Principle of electro-magnetism, Maxwell's corkscrew rule, Fleming's left and right hand rules, Magnetic field of current carrying conductors, loop and solenoid. MMF, Flux density, reluctance. B.H. curve, Hysteresis, Eddy current. Principle of electro-magnetic Induction, Faraday's Law, Lenz's Law. Electrostatics: Capacitor- Different types, functions and uses.

18-19	Determine the characteristics of R, XL and XC in A.C. Circuits both in series and parallel. Experiment on poly phase circuits. Current, voltage, power and power factor measurement in single & poly- phase circuits. Measurement of energy in single and poly-phase circuits. Use of phase sequence meter.	Alternating Current -Comparison and Advantages D.C and A.C. Related terms frequency Instantaneous value, R.M.S. value Average value, Peak factor, form factor. Generation of sine wave, phase and phase difference. Inductive and Capacitive reactance Impedance (Z), power factor ; Active and Reactive power, Simple problems on RLC A.C. circuits, Single phase and three-phase system etc. Problems on A.C. circuits. Power consumption in series and parallel, P.F. etc. Concept three-phase Star and Delta connection. Line and phase voltage & current and power in a 3 phase circuits with balanced and unbalanced load
20	Practice on Earthing - different methods of ear thing. Measurement of Earth resistance by earth tester. Connection & Testing of Earth Leakage by ELCB.	Earthing - Principle of different methods of ear thing. i.e. Pipe, Plate, etc Importance of Earthing. Improving of earth resistance Earth Leakage circuit breaker (ELCB). In absence of latest revision in respective BIS provision for Earthing it is recommended to follow IEC guidelines.
21	Determine the resistance by Colour coding Identification of active/ passive components. Diodes -symbol - Tests - Construct & Test Half wave rectifier circuit Full wave rectifier circuit Bridge rectifier circuit	Basic electronics - Semiconductor energy level, atomic structure 'P' type and 'N' type. Type of materials –P-N-junction. Classification of Diodes – Reverse and Forward Bias, Heat sink. Specification of Diode Explanation and importance of D.C. rectifier circuit. Half wave, Full wave and Bridge circuit. Filter circuits-passive filter.
22 - 23	Industrial visit	t / project work
24 - 25	NCVT EXAMINATION	
26	Semester Gap	

SEMESTER-II

Week No.	Trade Practical	Trade Theory
	ELECTRICAL MEASURING INSTRUMENTS-	Type of measuring instruments – MC & MI,
	Measurement of voltage, current & resistance in	Construction & working principles of Ammeter,
	different circuits. Direct & indirect measurement of	Voltmeter, Ohm-meter, Wattmeter, Energy meter,
	electrical power & energy. Calibration of energy	P.F. meter, frequency meter, multi meter, clamp
	meters. Measurement of current and voltage using	meter, Megger & earth tester. Introduction of Digital
	CT & PT, Measurement of 3 Phase energy using CT	meters. CT & PT. Tong tester / Clip on Meter.
1 - 2	& PT. Phase sequence meter, measure current and	
1 2	voltage using Tong tester. Power measurement by	
	Two & Three watt meter method	
	Insulation resistance test by Megger.	
	Measurement of earth resistance by earth tester.	
	Calibration of indicating type analogue instruments:	
	voltmeter, ammeter, and wattmeter. Measurement of soil	
	conductivity. Introduction of Digital meters.	
	DOMESTIC WIRING - METHODS,	Introduction and explanation of electrical wiring
	INSTALLATION & TESTING-	systems, cleat wiring, casing & Capping, CTS,
	Demonstration & Practice on connecting common	Conduit and concealed etc.,
	electrical accessories in circuits and testing them in	I. E. Rules. Related to wiring, National Building
	series board. Demonstration on Testing &	codes for house wiring, specification and types, rating
	replacement of different types of fuses.	& material.
3 - 4	Identification of different wiring materials and their	
	specifications.	
	Removing of insulation from assorted wires and	
	cables. Demonstration and practice crimping	
	thimbles/lugs of various sizes. Jointing practice with	
	single and multi-stranded conductors of different	
	wires and cables.	
	Layout on wiring boards. Practice in P.V.C.	Branching of circuits with respect to loads such as
5	insulated cable wiring on wood buttons with	lighting and power.
	distribution board and number of points.	CTS/PVC Conduit-surface and concealed/metal
5		conduit/PVC casing and capping.
		IE rules regarding clip distance. Fixing of screws,
		cable bending etc

6	Practice of wiring: A) One lamp controlled by one SP switch, (B) Two lamps controlled by two independent switches, (C) One lamp controlled by two 2way switches (Staircase wiring), (D)One lamp controlled by intermediate switch from three different locations, (E)Hospital wiring, (F)Tunnel/Godown wiring, (G)Hostel wiring, (H)Bell Buzzer Indicator wiring (I)Domestic wiring practice	Description of different electrical fittings and accessories such as lamp holders, switches, plugs brackets, ceiling rose, cut out etc. IS 732-1963.Wiring materials used for P.V.C. cables I.E. rules, Indian standards regarding the above wiring such as-clip distance fixing of screws, cable bending etc.
7	Demonstration and practice of using Rowel tools, Demonstration and practice of casing and capping wiring. Testing of wiring installation by using Megger.	Description of Rowel tools and Rowel plugs, their sizes, plugging, compound, plugs- wall jumper and their sizes and uses. Introduction to estimation procedure, P.V.C. casing and capping materials, sizes and grades etc.
8	Demonstration and practice in cutting and threading conduit pipes. Cold and hot bending of pipes. Fitting of conduit accessories.	Conduit pipe wiring materials and accessories, types and sizes of conduit.
9	Preparation of conduit threads using different fittings and use of running threads wiring in conduit, using metal clad 3 pin plug, Earthing the conduit using earth clips and earth wire.	Layout of Light points, fan points etc. Layout of heating leads etc their controls, main switches, distribution boards as per I.E. rules. I. E. Rules for earthing conduits using earth clips and earth wire as per IS 732-1963.
10	 ILLUMINATION:- Installation of - Neon Sign tube, Mercury vapour (H.P. & L.P.), Sodium vapour, Halogen Lamps, single tube, double tube, Metal halide lamps. Emergency light. Practice on decoration lighting . Practice on using LUX Meter. Installation and testing of CFL Lamps and LED Lamps 	Introduction of Illumination- Terms & definitions, laws of illumination, illumination factors, intensity of light –importance of light, colour available. Construction, working & applications of – Incandescent lamp, Fluorescent tube, CFL, Neon sign, Halogen, Mercury vapour and types, sodium vapour etc. Decoration lighting, Drum Switches etc.
11-13	INDUSTRIAL WIRING- Tests on insulating materials. Measurement of insulation resistance, of commercial and industrial installation Additional practice in conduit wiring. Industrial	Connections of different types of motors used in industry, their normal methods of wiring, Control, starting and protection devices-their connections, layouts and earthing Code practice for earthing of Industrial Wiring.

	power wiring involving single phase & 3phase motors with switches & starters.	Wiring methods & types in workshop & factories.
	COMMERCIAL WIRING-	Wiring in commercial building- their special
14	Inverter wiring./ Control panel wiring / multi-	precautions as per I.E. rules.
14	storeyed building wiring.	Introduction to LAN wiring.
	Introduction to LAN wiring.	
	Installation of 1 ph. and 3 ph. on line / off line UPS	Power drives - Introduction, types, advantages &
15 16	wiring. Testing of Industrial wiring and UPS wiring	disadvantages.
13-10	installation.	UPS- Introduction, types, Load calculation, Backup
		time calculation.
	Straight and cross crimping of RJ-45 cable.	Computer networking - Identification of network
17	crimping of co-axial cable, proper installation of co-	hardware / component. CAT-6 cable, RJ-45.
17	axial cable from dish antenna to Television set.	DTH- Introduction of direct to home system, Music
		channel wiring/interconnecting couplers.
	Industrial wiring installations for mixed load,	General idea of fixing meter boards & taking service
	both light and power.	connection. Sealing of I.C. cut out & meters as per
19	Layout of L.V. AC/DC machines and their panels.	I.E. Rules, General Electric Appliances using heating
10	Wiring of Low power A.C./ D.C. machines in metal	effect – their capacities, voltage ranges,
	conduit system as per I.E. Rules.	Calculation of current
	Testing of wiring installation	
19	Wiring of different circuit using Single core cable	Explanation of inter connection wiring circuits in the
	use for 2 ways, intermediate master switches etc.	main building and auxiliary blocks, meter boards and
	Testing of wiring installation.	its locations. Study of layout symbols in the
		preparation of layout diagrams

	COMPUTER AWARNESS:	Block diagram of computer, main parts inside the
	Identification of Computer Parts, Switching	system unit, ports & connectors, of PC parts &
	ON/OFF of PC, Safety Precautions.	peripherals associated with PC like-keyboard, Mouse,
	Identifying and using Windows, like folders, files,	Printers, Scanners, Camera, Modem, External Storage
	Editing and saving. Windows Explorer, Notepad,	Devices & UPS.
20-21	Paint and calculator.	Features of Operating System like M.S. Windows,
	OFFICE PACKAGE& INTERNET:	Components of Windows- Calculator, Notepad, Paint,
	Using /Practicing WORD, EXCEL, POWER	Windows Explorer.
	POINT for communication. Documentation.	INTERNET : Websites, Browsing, Downloading Creating
	Internet Practicing – Browsing/ Creating Email,	and Using E-mail ID's Using it for Communications.
	Downloading.	
22.22	Industrial visit / project work	
22 - 23		
24 25	NCVT EXAMINATION	
24 - 25		
26	Semester Gap	
20		

SEMESTER-III

Week No.	Trade Practical	Trade Theory
1	Identify the terminals of LED, Diode, transistor,	LED, Diode, types of transistor, UJT, SCR, regulator
1	Zener diode, UJT, SCR, regulator ICs and test it.	ICs and Zener diode uses and its application
	Construct and test variable DC power supply and	IC - voltage regulator pin configurations and
2	trouble shoot the defects in a simple power	applications.
	supply.	
	Construction & testing of various electrical circuits	Common Electrical Accessories, their specifications-
	With different accessories.	Explanation of switches, lamp holders, plugs and
	Connection of Calling Bell, Buzzer, Electric Iron,	sockets etc. Development of domestic circuits using
	Heater, Light & Fan etc. Practice in soldering and	switches, fuse, MCB, sockets, lamp, fan, calling
3-4	brazing by following Indian Electricity rules.	bell/buzzer, I wo way switch, I.C.I.P, I.C.D.P,
		Importance of Neutral effect of opening of neutral
		wire
		Soldering - Solders flux and soldering techniques
		Types of soldering irons-their proper use
	D.C. GENERATORS	Introduction to DC Generators and working
	Identification of the parts of D C. Generators	principle parts of D.C. Generator
5	Testing and measuring the field and Armature	Classification of Generators- Self excited and
_	resistances. Dismantle the D.C. Generator and	separately excited- their application in practical field.
	Reassemble and test for its working.	
	Identification of different parts of generators testing	Types and characteristics of D.C. Generators – Series,
	fields&Apparatus.Insulationresistance	Shunt and compound, their applications. Explanation
6-7	measurements. Building up of voltage and loading	of Armature reaction, interlopes, commutation and
	generators. Servicing of generators including	EMF equation of DC generators.
	replacing of carbon brushes.	Parallel operation of Generators
8	MOTORS & STARTER: Practice in connecting	Introduction to D.C. Motor-Working principle, types
	generators- Generators- Testing of D.C. Machines	of motors Explanation of terms used Torque, speed,
	by Megger. General maintenance of D.C.	Back E.M.F. etc.
	machines.	Characteristics, Speed control of DC motors
9-10	Testing of D.C. Motors - connect run and change	Necessity of starter- Types of starters, 2 point 3 point
7 10	direction of rotation. Study of DC starters- 2 point 3	and 4 point starters, Protective devices used. Methods

	point and 4 point speed control of D.C. Motors and	of speed control, advantages, disadvantages &
	speed measurement. Use Revolution counter.	Industrial applications. Trouble shooting and fault
	Trouble shooting and fault rectification.	rectification.
	Identify and test different types of D.C motors.	
	Tests on 3 phase circuit. – Current and voltage	Introduction to A.C. Poly phase systems-advantages, 3
	measurement in star and delta connections.	phase star delta. Terms used in 3Ø systems,
11 12	Measurement A.C. 3 ph. power. Determine the V	connection and their relations w.r.t. current and
11 -12	and I relation in Star/Delta connections in a 3-Ph	voltage. Principle of measurement of A.C. 3 ph.
	motor.	Power. Simple calculation of A.C. 3phase circuit
		parameter - I, V, Z & P.F. etc.
	A.C. GENERATORS, MOTORS & STARTERS	Parts and construction of Alternators, principle of
	Identification of Alternator of parts. Running of	working, types of Alternators, EMF equation. Various
13 14	Alternator by prime mover and loading it to find out	applications and power rating of alternators. General
13-14	regulation at different loads. Testing of alternators	idea of loading and regulation of Alternator. Parallel
	(IR tests). Connect and test Parallel operation of	operation of Alternators, synchronising methods.
	alternators.	
	Demonstration and practice on A.C single phase	Introduction to A.C single phase motors and types.
15	motors starting and running for specific	Capacitors start/run- start and run. FHP motors and
15	requirements.	their uses. Various application of A.C single phase
		motors.
	Constructional details of three phase squirrel cage	Three phase Induction motor: - Construction,
	induction motor and slip ring induction motor.	Principle of operation of Three phase induction motor.
	Determination of slip and efficiency.	Squirrel cage induction motor and slip ring induction
	Familiarisation of DOL starter, Star- delta starter,	motor. Rotor slip, rotor frequency and rotor torque.
16-18	Autotransformer starter and slip ring IM starter.	factors affecting torque.
10 10	Phase sequence test on three phase IM motors,	Effect of variation in applied voltage. Starting
	Single phasing preventer. Identification of A.C and	methods. Speed control methods. Importance of phase
	D.C motors (identify motors from the stock/scrap).	sequence in three phase induction motor. Single
	Construction of simple control circuits using push	phasing preventer.
	button and contactors.	
19	Connect and run the A.C single phase and 3-Ph	Starters - DOL starter, Star – delta starter and Auto
	motors by using starters.	transformer starter.

20-21	A.C. motor panel wiring (slip ring Induction type) POWER WIRING FOR DC & AC MOTORS Practice power and control circuits on boards. Assembly & testing of the frame for a panel – suitable for motor generator set. I.S. 3072 Part-II of 1961. Erection of panel board, fixing of controlling and starting equipment, necessary meters.	Description of starter delta starter (manual, semi and Auto). Internal arrangement of a motor resistance starter for slip ring induction motor. Motor control circuit and starting devices. Power and control wiring circuits of AC motors.
22-23	Industrial visi	t / project work
24-25	NCVT EXAMINATION	
26	Semester Gap	

SEMESTER-IV

Week No.	Trade Practical	Trade Theory
1-4	Identification of types of transformers.	TRANSFORMERS –
	To test / check the polarity of single phase	Power Transformer - Its construction, working,
	transformer.	performance, parallel operation of transformer, their
	Insulation Testing of single phase and Three	connections. Cooling of transformer,
	Phase.	S.C. & O.C. tests. Regulation and efficiency,
	Conducting No-load/O.C. & short circuit tests.	Specifications, problems on e.m.f. Equation,
	Connection of transformers, efficiencies of	transformation ratio.
	transformers, parallel operation of transformer.	Characteristics of ideal transformer.
	Ratio test and voltage regulation.	Construction of core, winding shielding, auxiliary
		parts breather, conservator. Buchholz's relay, other
		protective devices.
		Transformer oil testing and Tap changing off load
		and on load.
		Transformer bushings and termination. Auto
		transformer- Its construction, working, performance
		& uses.
	Familiarize and practice operation of OH line	GENERATION, TRANSMISSION AND
5-7	components. Visit to generating station	DISTRIBUTION OF ELECTRICAL POWER
	(Thermal/ Hydro/Nuclear)	Generation of Electricity and their types.
	Visit to a sub-station to familiarize OH line	General idea about overhead transmission,
	components. Prepare a line diagram of the	distribution (LV,MV& HV) and their types of
	institute/ ITI supply system.	accessories used. General arrangement and
		maintenance of outdoor type of substation.
		Explanation of overhead bus bar, side by bar.
		Bus trunking and rising mains.
		I.E. rules regarding panel erection, bus bar,
		spacing bus bar chamber, danger boards.
		Connection of high voltage metering equipment

used with bus	bar.
Demonstration testing and use of line Types of Dist	ribution Explanation of line
Demonstration, testing and use of fine Types of Dist	vises and their general principle
8 protecting devices as per I.E. Rules. protecting dev	vices and their general principle.
Visit to Distribution - station. Brief descript	tion of connection of places of use.
Familiarization and operation of various CBs SUBSTATIO	N EQUIPMENTS
ACB, VCB, SF6, OCB etc. visit to sub-station. Switchgear-CF	Bs – ACB,VCB, SF6, OCB etc.
Demonstration and Tests on Multi range switches, protection sche	emes, CT/PT-Protective relays,
Rotary switches. Cooker control Panel, Power lightning arres	tors,
circuit switches Thermostats. Mercury switches, Explanation of	different types of switches and
visit/in plant training in a industry. switches gears	multi Range switches, rotary switches,
cooker control	panels, power circuit switches,
thermostat, me	ercury switches etc.
Familiarize the parts of substations low and high TYPES OF S	UBSTATIONS - INDOOR,
voltages OUTDOOR &	& POLE MOUNTING
Substation con	struction:
i. Outdoor and	Indoor substation.
ii. E.H.T. subs	tation
iii. H.T. substa	tion
iv. Medium &	low voltage substation (Pole mounting
type)	
Demonstration and practice in terminating an U.G. CABLE	
12-13 U.G. cable to a bus bar chamber. Crimping lugs Construction	of cable, Types, Application &
to the conductors of U.G. cable and connection to methods of joi	nting UG cable & testing
bus bar Loop connection for other circuit. General idea	of laying method and jointing
precautions to	be observed and different accessories
used for mediu	im voltage termination.
Synchronizing Need of Synch	ronizing, various methods, precautions
Building up the alternator output voltage, to be observed	while Synchronizing.
¹⁴ Synchronizing of bus bar voltage with generated	
voltage	
Control panel wiring Control Panel	elements, types and specifications.
Preparation of control panel board and its layout Layout and ins	tallation of panel board, Panel board
¹³⁻¹⁰ Fixing of indicating meters /Instruments, Control wiring method	s, colour coding of cables for its easy
devices, Protection devices. Fixing of cable entry identification.	Grouping and numbering of cables by

	and exit points	using ferrules.
17	Preventive maintenance and routine tests. Fault location and remedy practice both in domestic and industrial wirings. Practice in fixing conduit along with the girder, steel structures station etc.	Importance and advantages of maintenance. Points to be observed to maintain the installation, preventive maintenance and routine tests. Common faults, causes and remedies in domestic and industrial wiring installation, Methods of Locating faults.
18-20	Planning , Estimation and Costing of Wiring- Planning and Preparation of layout for domestic, commercial, Multi storied building wiring and workshop electrical wiring. Estimation and costing of Labour, materials and accessories as per layout.	Concept and Principle of plan, estimation and cost. Preparation of complete house wiring layout, industrial wiring, commercial wiring for office Lodge, Hospital, Bank, Hotels etc. I.E. rules for Multi-storied buildings.
21-22	 <u>Project Work</u> Over hauling and Testing of 3 phase Induction motor Over hauling and testing of Ceiling / Table Fan. Preparation of series test board with indicating digital metres. Construction and test regulated power supply of 6-12 Volt DC. Construct and Test Decorative running LED lamp assembly. Installation of Pumpset. 	
23	Industrial visit	
24-25	NCVT EXAMINATION	
26	Semester Gap	