

# Gurukul Pvt. ITI

Manglam City, Kalwar Road, Jaipur

Trade -ELECTRICIAN				
Syllabus Breakup Daily				
Week	Day	Subject	Theory (02 hours)	Practical (05 hours)
1	1	Theory	Scope of the electrician trade.	Visit various sections of the institutes and location of electrical installations. (05 hrs)
	2		Safety rules and safety signs.	Identify safety symbols and hazards. (05 Hrs)
	3	W/Shop calculation	Classification of Unit System Fundamental and Derived Units F.P.S, C.G.S, M.K.S and SI Units ,Measurement Units and Conversion,Factors, HCF, LCM and Problems	Preventivemeasures for electrical accidents and practice steps to be taken in such accidents. (05 hrs)
	4	Engg. Drawing	Engineering Drawing – Introduction Introduction to Engineering Drawing and Drawing Instruments – -> Conventions -> Viewing of engineering drawing sheets. -> Method of Folding of printed Drawing sheet as per BIS SP: 46-2003	Practice safe methods of fire fighting in case of electrical fire. (05 hrs)
	5	ES	Behavioural Skill-Creating a focused and responsible learning envirnment-Chart paper Activity.	Theory : 3 hrs - Types and working of fire extinguishers. Extra curricular activity : 2 hrs
	6	ES	Self-awareness and confidence building, display professionalism at the institute and work place	Use of fire extinguishers. (05 Hrs)

Total Week Hrs : 40 , Theory : 7 Hrs , Practical : 25 hrs , Engg. Drawing : 2 Hrs , W/S Cal Sc : 2 Hrs , ES : 4 Hrs

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Syllabus Breakup Daily				
Week	Day	Subject	Theory (02 hours)	Practical (05 hours)
2	1	Theory	First aid safety practice. Hazard identification and prevention.	Practice elementary first aid. (05 hrs)
	2		Personal safety and factory safety.	Rescue a person and practice artificial respiration. (05 Hrs)
	3	W/Shop calculation	Fractions – Addition, Subtraction, Multiplication and Division -> Decimal Fractions - Addition, Subtraction, Multiplication and Division -> Solving Problems by using calculator	Disposal procedure of waste materials. (05 Hrs)
	4	Engg. Drawing	Drawing Instrument -> Drawing board, T-square, Drafter (Drafting M/c), Set squares, Protector, Drawing Instrument Box (Compass, Dividers, Scale, Diagonal Scales etc.), pencils of different grades, Drawing pins/ Clips.	Use of personal protective equipments. (05 hrs)
	5	ES	Increased Social initiations relationships and networks . Acceptance of peers from different cultures and social groups and work with them . Collaboration with team to prioritise the common goal and compromise individual priorities.	Theory : 3 hrs -Response to emergencies e.g. power failure, system failure and fire etc. Extra curricular activity : 2 hrs
	6	ES	Characteristic of a responsible citizen- Display the same by respecting self, others, environment, care for duty and value for time.	Practice on cleanliness and procedure to maintain it. (05 hrs)

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Syllabus Breakup Daily				
Week	Day	Subject	Theory (02 hours)	Practical (05 hours)
3	1	Theory	Concept of Standards and advantages of BIS/ISI.	Identify trade tools and machineries. (5 Hrs)
	2		Trade tools specifications.	Identify trade tools and machineries. (5 Hrs)
	3	W/Shop calculation	Square and Square Root -> Simple problems using calculator -> Application of Pythagoras Theorem and related problems	Practice safe methods of lifting and handling of tools & equipment. (05 Hrs)
	4	Engg. Drawing	Free hand drawing of – -> Lines, polygons, ellipse etc.	Select proper tools for operation and precautions in operation. (05 Hrs)
	5	ES	Adopting best practices and aspire to follow success stories of individual for personal development.	Theory : 3 hrs - Introduction to National Electrical Code-2011. Extra curricular activity : 2 hrs
	6	ES	English literacy:-Importance of learning english	Care & maintenance of trade tools. (05 Hrs)

Total Week Hrs : 40 , Theory : 7 Hrs , Practical : 25 hrs , Engg. Drawing : 2 Hrs , W/S Cal Sc : 2 Hrs , ES : 4 Hrs

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Week	Day	Subject	Theory (02 hours)	Practical (05 hours)
4	1	Theory	Allied trades: Introduction to fitting tools, safety precautions.	Operations of allied trade tools. (05 Hrs)
	2		Description of files, hammers, chisels	Workshop practice on filing and hacksawing. (5 Hrs)
	3	W/Shop calculation	Monthly Test WCS	Workshop practice on filing and hacksawing. (5 Hrs)
	4	Engg. Drawing	Monthly Test ED	Prepare hand coil winding assembly. ( 5 Hrs)
	5	ES	Monthly Test ES	Monthly Test theory
	6	ES	Different naming words, word used for replacing names, action words, describing people, place and their use.	Monthly Test Practical

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Week	Day	Subject	Theory (02 hours)	Practical (05 hours)
5	1	Theory	hacksaw frames, blades, their specification and grades	Practice on preparing T-joint, straight joint and dovetail joint on wooden blocks. (15Hrs)
	2		Marking tools description and use.	Practice on preparing T-joint, straight joint and dovetail joint on wooden blocks. (15Hrs)
	3	W/Shop calculation	Ratio and Proportions -> Direct and Indirect proportion -> Percentage -> Changing percentage to decimal	Practice sawing, planing, drilling and assembling for making a wooden switchboard. (15Hrs)
	4	Engg. Drawing	Geometrical figures and blocks with dimension	Practice sawing, planing, drilling and assembling for making a wooden switchboard. (15Hrs)
	5	ES	Introduction to punctuation-comma, full stop, question mark.	Theory : 3 hrs - Types of drills, description & drilling machines. Various wooden joints. Extra curricular activity : 2 hrs
	6	ES	Singular plural	Practice sawing, planing, drilling and assembling for making a wooden switchboard. (15Hrs)

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Week	Day	Subject	Theory (02 hours)	Practical (05 hours)
6	1	Theory	Marking tools; calipers Dividers, Surface plates, Angle plates, Scribes,	Practice in marking and cutting of straight and curved pieces in metal sheets, making holes, securing by screw and riveting. (10 Hrs)
	2		punches, surface gauges Types, Uses, Care and maintenance.	Practice in marking and cutting of straight and curved pieces in metal sheets, making holes, securing by screw and riveting. (10 Hrs)
	3	W/Shop calculation	Types of metals -> Physical and Mechanical Properties of metals	Workshop practice on drilling, chipping, internal and external threading of different sizes. (20Hrs)
	4	Engg. Drawing	Transferring measurement from the given object to the free hand sketches.	Workshop practice on drilling, chipping, internal and external threading of different sizes. (20Hrs)
	5	ES	Change of tense-simple present, past; present, past progressive	Theory : 3 hrs - Sheet metal tools: Description of marking & cutting tools. Extra curricular activity : 2 hrs
	6	ES	Construction of simple sentences-kinds of sentences	Workshop practice on drilling, chipping, internal and external threading of different sizes. (20Hrs)

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Week	Day	Subject	Theory (02 hours)	Practical (05 hours)
7	1	Theory	Types of rivets and riveted joints.	Workshop practice on drilling, chipping, internal and external threading of different sizes. (20Hrs)
	2		Use of thread gauge.	Practice of making square holes in crank handle. (5 Hrs)
	3	W/Shop calculation	Types of ferrous and non-ferrous metals -> Introduction of iron and cast iron	Prepare an open box from metal sheet. (15 Hrs)
	4	Engg. Drawing	Solid objects – Cube, Cuboids, Cone, Prism, Pyramid, Frustum of Cone with dimensions.	Prepare an open box from metal sheet. (15 Hrs)
	5	ES	Usege of appropriate words to express themselves	Theory : 3 hrs - Description of carpenter's tools Care and maintenance of tools. Extra curricular activity : 2 hrs
	6	ES	Greetings & self indroduction	Prepare an open box from metal sheet. (15 Hrs)

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Week	Day	Subject	Theory (02 hours)	Practical (05 hours)
8	1	Theory	Fundamentals of electricity, definitions, units & effects of electric current.	Prepare terminations of cable ends, Practice on skinning, twisting and crimping.
	2		Conductors and insulators. Conducting materials and their comparison.	Practice on skinning, twisting and crimping.
	3	W/Shop calculation	Monthly Test WCS	Identify various types of cables and measure conductor size using SWG and micrometer.
	4	Engg. Drawing	Monthly Test ED	Identify various types of cables and measure conductor size using SWG and micrometer.
	5	ES	Monthly Test ES	Monthly Test theory
	6	ES	Asking & self introduction	Monthly Test Practical

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Week	Day	Subject	Theory (02 hours)	Practical (05 hours)
9	1	Theory	Joints in electrical conductors.	Conducting materials and their comparison.
	2		Joints in electrical conductors.	Conducting materials and their comparison.
	3	W/Shop calculation	Difference between iron and steel, alloy steel and carbon steel -> Properties and uses of rubber, timber and insulating materials	Conducting materials and their comparison.
	4	Engg. Drawing	Free hand drawing of hand tools and measuring tools, simple fasteners (nuts, bolts, rivets etc.) trade related sketches	Make britannia straight, britannia Tee and rat tail joints.
	5	ES	Asking & responding to question	Theory : 3 hrs -Techniques of soldering. Extra curricular activity : 2 hrs
	6	ES	Sharing information with others	Make britannia straight, britannia Tee and rat tail joints.

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Week	Day	Subject	Theory (02 hours)	Practical (05 hours)
10	1	Theory	Techniques of soldering.	Make britannia straight, britannia Tee and rat tail joints.
	2		Types of solders and flux.	Make britannia straight, britannia Tee and rat tail joints.
	3	W/Shop calculation	Mass, volume, density, weight & specific gravity	Practice in Soldering of joints / lugs.
	4	Engg. Drawing	Lines -> Definition, types and applications in drawing as per BIS: 46-2003 -> Classification of lines (Hidden, centre, construction, extension, Dimension, Section)	Practice in Soldering of joints / lugs.
	5	ES	Formal and informal communication	Theory : 3 hrs -Types of solders and flux. Extra curricular activity : 2 hrs
	6	ES	Speak and provide information about workplace	Practice in Soldering of joints / lugs.

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Week	Day	Subject	Theory (02 hours)	Practical (05 hours)
11	1	Theory	Underground cables:Description,	Identify various parts, skinning and dressing of underground cable. (15 Hrs)
	2		Underground cables: types, various joints	Identify various parts, skinningand dressing of underground cable. (15 Hrs)
	3	W/Shop calculation	Related problems for mass, volume, density, weight & specific gravity	Identify various parts, skinningand dressing of underground cable. (15 Hrs)
	4	Engg. Drawing	Drawing lines of given length (Straight, curved) -> Drawing of parallel lines, perpendicular line -> Methods of Division of line segment	Make straight joint of different types of underground cable.
	5	ES	Discussions on current happenings. Self, Work, Environment	Theory : 3 hrs - testing procedure of underground cables Extra curricular activity : 2 hrs
	6	ES	Simple writing skills	Make straight joint of different types of underground cable.

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Week	Day	Subject	Theory (02 hours)	Practical (05 hours)
12	1	Theory	Cable insulation & voltage grades	Make straight joint of different types of underground cable.
	2		Cable insulation & voltage grades	Test insulation resistance of underground cable using megger. (05 hrs)
	3	W/Shop calculation	Rest, motion, speed, velocity, difference between speed and velocity, acceleration and retardation	Test underground cables for faults and remove the fault. (15 Hrs)
	4	Engg. Drawing	Definition, nomenclature and practice of –	for faults and remove the fault. (15 Hrs)
	5	ES	Communication Skills:-Interview Skill/Confidence Building	Theory : 3 hrs -Precautions in using various types of cables. Extra curricular activity : 2 hrs
	6	ES	Professionalism and display of same at the institute and work place	Test underground cables for faults and remove the fault. (15 Hrs)

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Week	Day	Subject	Theory (02 hours)	Practical (05 hours)
13	1	Theory	Ohm's Law; Simple electrical circuits and problems.	Practice on measurement of parameters in combinational electrical circuit by applying Ohm's Law for different resistor values and voltage sources and analyse by drawing graphs
	2		Kirchoff's Laws and applications.	Practice on measurement of parameters in combinational electrical circuit by applying Ohm's Law for different resistor values and voltage sources and analyse by drawing graphs
	3	W/Shop calculation	Quarterly Test WCS	Measure current and voltage in electrical circuits to verify Kirchhoff's Law (10 Hrs)
	4	Engg. Drawing	Quarterly Test ED	Measure current and voltage in electrical circuits to verify Kirchhoff's Law (10 Hrs)
	5	ES	Quarterly Test ES	Quarterly Test theory
	6	ES	Understand the usage of appropriate words to express themselves communicate effectively on telephone.	Quarterly Test Practical

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Week	Day	Subject	Theory (02 hours)	Practical (05 hours)
14	1	Theory	Series and parallel circuits.	Verify laws of series and parallel circuits with voltage source in different combinations. (05Hrs)
	2		Open and short circuits in series and parallel networks.	Measure voltage and current against individual resistance in electrical circuit (10 hrs)
	3	W/Shop calculation	Related problems on speed and velocity	Measure voltage and current against individual resistance in electrical circuit (10 hrs)
	4	Engg. Drawing	Triangle: different types	Measure current and voltage and analyse the effects of shorts and opens in series circuit. (05 Hrs)
	5	ES	Manage personal hygiene and presentation positive body language:adopt and use it appropriately to build a positive impression	Theory : 3 hrs -Open and short circuits in series and parallel networks. . <b>Parents instructor meeting: 2 hrs</b>
	6	ES	Different spatial zones: Understanding and need to maintain it, create safe zones for communication	Measure current and voltage and analyse the effects of shorts and opens in parallel circuit. (05 Hrs)

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### Syllabus Breakup Daily

Week	Day	Subject	Theory (02 hours)	Practical (05 hours)
15	1	Theory	Laws of Resistance and various types of resistors. Wheatstone bridge; principle and its applications.	Measure resistance using voltage drop method. (5 Hrs)
	2		Wheatstone bridge; principle and its applications. Effect of variation of temperature on resistance.	Measure resistance using wheatstone bridge. (5 Hrs)
	3	W/Shop calculation	Potential energy, Kinetic Energy and related problems with related problems	Determine the thermal effect of electric current. (5 Hrs)
	4	Engg. Drawing	Rectangle, Square, Rhombus, Parallelogram	Determine the change in resistance due to temperature.
	5	ES	Maintainig appropriate eye-contact in building trust and confidence	Theory : 3 hrs -Different methods of measuring the values of resistance. Series and parallel combinations of resistors. Extra curricular activity : 2 hrs
	6	ES	Impact of touch in a formal environment. Acceptable and unacceptable touch.	Verify the characteristics of series parallel combination of resistors. (5 Hrs)

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Week	Day	Subject	Theory (02 hours)	Practical (05 hours)
16	1	Theory	Magnetic terms, magnetic materials and properties of magnet.	Determine the poles and plot the field of a magnet bar.
	2		Principles and laws of electro-magnetism.	Determine the poles and plot the field of a magnet bar.
	3	W/Shop calculation	Work, power, energy, HP, IHP, BHP and efficiency	Wind a solenoid and determine the magnetic effect of electric current.
	4	Engg. Drawing	Circle and its elements	Measure induced emf due to change in magnetic field.
	5	ES	Time mangagement and planning skills interview skills its phases & ways to crack interview	Theory : 3 hrs -Self and mutually induced EMFs. Extra curricular activity : 2 hrs
	6	ES	Handing setbacks/rejection and recover from it with an action plan.	Determine direction of induced emf and current. (06 hrs)

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Week	Day	Subject	Theory (02 hours)	Practical (05 hours)
17	1	Theory	Electrostatics: Capacitor- Different types, functions, grouping and uses.	Practice on generation of mutually induced emf. (08 hrs)
	2		Inductive and capacitive reactance, their effect on AC circuit and related vector concepts.	Measure the resistance, impedance and determine inductance of choke coils in different combinations.
	3	W/Shop calculation	Monthly Test WCS	Identify various types of capacitors, charging / discharging and testing. (05 Hrs)
	4	Engg. Drawing	Monthly Test ED	Group the given capacitors to get the required capacity and voltage rating. (05 Hrs)
	5	ES	Monthly test ES	Monthly Test theory
	6	ES	Developing strong professional contract/network to gain support in learning process and career as a whole	Monthly Test Practical

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Week	Day	Subject	Theory (02 hours)	Practical (05 hours)
18	1	Theory	Comparison and Advantages of DC and AC systems.	Measure current, voltage and PF and determine the characteristics of RL, RC and RLC in AC series circuits.
	2		Related terms frequency, Instantaneous value, R.M.S. value Average value, Peak factor, form factor, power factor and Impedance etc.	Measure current, voltage and PF and determine the characteristics of RL, RC and RLC in AC series circuits.
	3	W/Shop calculation	Concept of heat and temperature, effects of heat, difference between heat and temperature -> Scales of temperature, Celsius, Farenhieght, Kelvin and Conversion between scales of temperature	Measure the resonance frequency in AC series circuit and determine its effect on the circuit. (07 hrs)
	4	Engg. Drawing	Different polygon and their values of included angles. Inscribed and circumscribed polygons	Measure current, voltage and PF and determine the characteristics of RL, RC and RLC in AC parallel circuits. (08 Hrs)
	5	ES	Literacy:- Indtroduction to computers and its applications hardware and peripherals, sstarting and shutting down of computer, basic ofn computer networks.	Theory : 3 hrs -Related terms frequency, Instantaneous value, R.M.S. value Average value, Peak factor, form factor, power factor and Impedance etc. Extra curricular activity : 2 hrs
	6	ES	Basics of Operating System, Types of operating systems, user interface of widows OS/ latest create, copy move and delete files and folders, use of external memory like pen drive, CD,DVD etc, introduction toinbuilt windows apps, tools and features.	Measure current, voltage and PF and determine the characteristics of RL, RC and RLC in AC parallel circuits.

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Week	Day	Subject	Theory (02 hours)	Practical (05 hours)
19	1	Theory	Sine wave, phase and phase difference.	Measure the resonance frequency in AC parallel circuit and determine its effects on the circuit.
	2		Active and Reactive power.	Measure power, energy for lagging and leading power factors in single phase circuits and compare characteristic graphically.
	3	W/Shop calculation	Temperature measuring instruments, types of thermometer, pyrometer and transmission of heat - Conduction, convection and radiation	Measure power, energy for lagging and leading power factors in single phase circuits and compare characteristic graphically.
	4	Engg. Drawing	Lettering & Numbering – -> Single Stroke	Measure Current, voltage, power, energy and power factor in three phase circuits.
	5	ES	Basic operating of word processing, creating, opening and closing documents, use of shortcuts, creating and editing of text, formatting the text	Theory : 3 hrs -Single Phase and three-phase system. Problems on A.C. circuits. Extra curricular activity : 2 hrs
	6	ES	Creating simple documents like resum, letter writing, job application etc., printing document	Practice improvement of PF by use of capacitor in three phase circuit.

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Week	Day	Subject	Theory (02 hours)	Practical (05 hours)
20	1	Theory	Advantages of AC poly-phase system.	Ascertain use of neutral by identifying wires of a 3-phase 4 wire system and find the phase sequence using phase sequence meter. (10 Hrs)
	2		Concept of three-phase Star and Delta connection.	Ascertain use of neutral by identifying wires of a 3-phase 4 wire system and find the phase sequence using phase sequence meter. (10 Hrs)
	3	W/Shop calculation	Co-efficient of linear expansion and related problems with assignments	Determine effect of broken neutral wire in three phase four wire system.(05 hrs)
	4	Engg. Drawing	Lettering & Numbering – Double Stroke	Determine the relationship between Line and Phase values for star and delta connections. (10Hrs)
	5	ES	Basic of excel worksheet and its importance creating simple worksheets adding and average function, printing of simple excel sheet.	Theory : 3 hrs -Concept of three-phase Star and Delta connection. Extra curricular activity : 2 hrs
	6	ES	Indroduction to world wide web. (www) usefull websides web browser-usege, search engine etc. Using popular sites like bharat skills, skill traing related govt. portals, nokari.com, and other job portals.	Determine the relationship between Line and Phase values for star and delta connections. (10Hrs)

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Week	Day	Subject	Theory (02 hours)	Practical (05 hours)
21	1	Theory	Line and phase voltage, current and power in a 3 phase circuits with balanced and unbalanced load.	Measure the Power of three phase circuit for balanced and unbalanced loads. (15 Hrs)
	2		current and power in a 3 phase circuits with balanced and unbalanced load.Phase sequence meter.	Measure the Power of three phase circuit for balanced and unbalanced loads. (15 Hrs)
	3	W/Shop calculation	Monthly Test WCS	Measure the Power of three phase circuit for balanced and unbalanced loads. (15 Hrs)
	4	Engg. Drawing	Monthly Test ED	Measure current and voltage of two phases in case of one phase is short-circuited in three phase four wire system and compare with healthy system.
	5	ES	Monthly Test ES	Monthly Test theory
	6	ES	Cits Applications , apprenticeship portal (naps), resize images, singing up, online fund transfer, using UPI gateway	Monthly Test Practical
22	<b>Project work /</b>			
23	<b>Project work / Industrial visit Broad Areas:</b> a) Prepare and assemble a test board with switches, plug socket, lamp holder etc. b) Temperature controlled system for switching 'ON' and 'OFF' of any circuit using bimetallic strip. c) Series/ parallel combinational circuits			
24	<b>Revision</b>			
25	<b>Revision</b>			
26	<b>Revision</b>			

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27	1	Theory	Chemical effect of electric current and Laws of electrolysis.	Use of various types of cells.
	2		Explanation of Anodes and cathodes. Types of cells, advantages / disadvantages and their applications.	Practice on grouping of cells for specified voltage and current under different conditions and care.
	3	W/Shop calculation	Problem of Heat loss and heat gain with Assignments -> Thermal conductivity and insulators	Practice on grouping of cells for specified voltage and current under different conditions and care.
	4	Engg. Drawing	Lettering & Numbering – Inclined.	Practice on grouping of cells for specified voltage and current under different conditions and care.
	5	ES	Creating and using an email account like gmail, and any other, usages of cc and bcc, attaching documents checking email and composing email	Theory : 3 hrs - Lead acid cell; Principle of operation and components. Extra curricular activity : 2 hrs
	6	ES	Scanning QR/AR code, sharing best practices and downloading trade Related videos using Wi-Fi, fund Transfer through app like BHIM.	Prepare and practice on battery charging and details of charging circuit. (12 Hrs)

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Week	Day	Subject	Theory (02 hours)	Practical (05 hours)
28	1	Theory	Types of battery charging, Safety precautions, test equipment and maintenance.	Prepare and practice on battery charging and details of charging circuit. (12 Hrs)
	2		Basic principles of Electro-plating and cathodic protection	Prepare and practice on battery charging and details of charging circuit.
	3	W/Shop calculation	Boiling point and melting point of different metals and Nonmetals -> Concept of pressure and its units in different system	Practice on routine, care/ maintenance and testing of batteries.
	4	Engg. Drawing	Dimensioning and its Practice -> Definition, types and methods of dimensioning (functional, non-functional and auxiliary) -> Position of dimensioning (Unidirectional, Aligned)	Determine the number of solar cells in series / parallel for given power requirement.
	5	ES	Entrepreneur skills:- Need of becoming Entrepreneur	Theory : 3 hrs - Grouping of cells for specified voltage and current. Principle and operation of solar cell. Extra curricular activity : 2 hrs
	6	ES	Ways to becoming a good entrepreneur	Determine the number of solar cells in series / parallel for given power requirement.

Total Week Hrs : 40 , Theory : 7 Hrs , Practical : 25 hrs , Engg. Drawing : 2 Hrs , W/S Cal Sc : 2 Hrs , ES : 4 Hrs

# Gurukul Pvt. ITI

Manglam City, Kalwar Road, Jaipur

Trade -ELECTRICIAN				
Syllabus Breakup Daily				
Week	Day	Subject	Theory (02 hours)	Practical (05 hours)
29	1	Theory	I.E. rules on electrical wiring. Types of domestic and industrial wirings.	Identify various conduits and different electrical accessories.
	2		Study of wiring accessories e.g. switches, fuses, relays, MCB, ELCB, MCCB etc.	Identify various conduits and different electrical accessories.
	3	W/Shop calculation	Introduction and uses of electricity, molecule, atom, how electricity is produced, electric current AC, DC and their comparison, voltage , resistance and their units	Practice cutting, threading of different sizes & laying Installations.
	4	Engg. Drawing	Types of arrowhead -> Leader line with text -> Symbols preceding the value of dimension and dimensional tolerance.	Practice cutting, threading of different sizes & laying Installations.
	5	ES	Enabling environment available to vecome an entrepreneur	Theory : 3 hrs - Study of wiring accessories e.g. switches, fuses, relays, MCB, ELCB, MCCB etc. Extra curricular activity : 2 hrs
	6	ES	Different Govt. institutions/schemes promoting entreprenur viz., Gramin bank, PMMY-MUDRA loan, DIC, SIDA SISI, NSIC, SIDO.	Practice cutting, threading of different sizes & laying Installations.

Total Week Hrs : 40 , Theory : 7 Hrs , Practical : 25 hrs , Engg. Drawing : 2 Hrs , W/S Cal Sc : 2 Hrs , ES : 4 Hrs



# Gurukul Pvt. ITI

Manglam City, Kalwar Road, Jaipur

Trade -ELECTRICIAN				
Syllabus Breakup Daily				
Week	Day	Subject	Theory (02 hours)	Practical (05 hours)
30	1	Theory	Study of wiring accessories e.g. switches, fuses, relays, MCB, ELCB, MCCB etc.	Prepare test boards / extension boards and mount accessories like lamp holders, various switches, sockets, fuses, relays, MCB, ELCB, MCCB etc.
	2		Principle of laying out of domestic wiring. Grading of cables and current ratings.	Prepare test boards / extension boards and mount accessories like lamp holders, various switches, sockets, fuses, relays, MCB, ELCB, MCCB etc.
	3	W/Shop calculation	Conductor, Insulator, types of connections- Series and Parallel, -> Ohm's Law, relation between VIR & related problems	Prepare test boards / extension boards and mount accessories like lamp holders, various switches, sockets, fuses, relays, MCB, ELCB, MCCB etc.
	4	Engg. Drawing	Sizes and layout of drawing sheets -> Selection of sizes -> Title Block, its position and content -> Item Reference on Drawing Sheet (Item list)	Prepare test boards / extension boards and mount accessories like lamp holders, various switches, sockets, fuses, relays, MCB, ELCB, MCCB etc.
	5	ES	Day to day monitoring mechanism for maintaing an enterprise.	Theory : 3 hrs - Voltage drop concept. Extra curricular activity : 2 hrs
	6	ES	Different Government shcems supporting entrepreneurship.	Prepare test boards / extension boards and mount accessories like lamp holders, various switches, sockets, fuses, relays, MCB, ELCB, MCCB etc.

Total Week Hrs : 40 , Theory : 7 Hrs , Practical : 25 hrs , Engg. Drawing : 2 Hrs , W/S Cal Sc : 2 Hrs , ES : 4 Hrs

# Gurukul Pvt. ITI

Manglam City, Kalwar Road, Jaipur

Trade -ELECTRICIAN				
Syllabus Breakup Daily				
Week	Day	Subject	Theory (02 hours)	Practical (05 hours)
31	1	Theory	PVC conduit and Casing-capping wiring system.	Draw layouts and practice in PVC Casing-capping, Conduit wiring with minimum to more number of points of minimum 15 mtr length.
	2		Different types of wiring	Draw layouts and practice in PVC Casing-capping, Conduit wiring with minimum to more number of points of minimum 15 mtr length.
	3	W/Shop calculation	Quarterly Test WCS	Wire up PVC conduit wiring to control one lamp from two different places.
	4	Engg. Drawing	Quarterly Test ED	Wire up PVC conduit wiring to control one lamp from two different places.
	5	ES	Quarterly Test ES	Quarterly Test theory
	6	ES	Examples of successful and unsuccessful entrepreneurs.	Quarterly Test Practical

Total Week Hrs : 40 , Theory : 7 Hrs , Practical : 25 hrs , Engg. Drawing : 2 Hrs , W/S Cal Sc : 2 Hrs , ES : 4 Hrs

# Gurukul Pvt. ITI

Manglam City, Kalwar Road, Jaipur

Trade -ELECTRICIAN				
Syllabus Breakup Daily				
Week	Day	Subject	Theory (02 hours)	Practical (05 hours)
32	1	Theory	Power, control, Communication and entertainment wiring.	Wire up PVC conduit wiring to control one lamp from three different places. (10 Hrs)
	2		Wiring circuits planning,	Wire up PVC conduit wiring to control one lamp from three different places. (10 Hrs)
	3	W/Shop calculation	Electrical power, energy and their units, calculation with assignments	Wire up PVC conduit wiring and practice control of sockets and lamps in different combinations using switching concepts.
	4	Engg. Drawing	Method of presentation of Engg. Drawing -> Pictorial View -> Orthographic View -> Isometric View	combinations using switching concepts.
	5	ES	Maintaning efficiency at workplace:- Factors affecting productivity	Theory : 3 hrs - permissible load in sub-circuit and main circuit. <b>Parents instructor meeting: 2 hrs</b>
	6	ES	Improving productivity	combinations using switching concepts.

Total Week Hrs : 40 , Theory : 7 Hrs , Practical : 25 hrs , Engg. Drawing : 2 Hrs , W/S Cal Sc : 2 Hrs , ES : 4 Hrs

# Gurukul Pvt. ITI

Manglam City, Kalwar Road, Jaipur

Trade -ELECTRICIAN				
Syllabus Breakup Daily				
Week	Day	Subject	Theory (02 hours)	Practical (05 hours)
33	1	Theory	Estimation of load, cable size,	Wire up the consumers main board with ICDP switch and distribution fuse box. (10 Hrs)
	2		Estimation of load, cable size,	Wire up the consumers main board with ICDP switch and distribution fuse box. (10 Hrs)
	3	W/Shop calculation	Magnetic induction, self and mutual inductance and EMF generation -> Electrical Power, HP, Energy and units of electrical energy	Wire up the consumers main board with ICDP switch and distribution fuse box. (10 Hrs)
	4	Engg. Drawing	Symbolic representation – different symbols used in the trades -> Fastener (Rivets, Bolts and Nuts)	Wire up the consumers main board with ICDP switch and distribution fuse box. (10 Hrs)
	5	ES	Personal finance literacy planning, saving, tax govt. shcems for financial safety e.g. Pradhan Mantri Jeevan Jyoti Bima Yojana (PMJJBY) etc.	Theory : 3 hrs - bill of material and cost. Extra curricular activity : 2 hrs
	6	ES	Occupational Safety, Health and environment Educaiton:-Introduction ton occupational safety & health at work place, occupational hygiene. Basuc Hazards, chemical, physical (elecricl. Temperature, illumination) ergonomic, biological, vibro acoustic, mechanical, psychosocial hazards, prevention of hazards	Estimate the cost/bill of material for wiring of hostel/ residential building and workshop.

Total Week Hrs : 40 , Theory : 7 Hrs , Practical : 25 hrs , Engg. Drawing : 2 Hrs , W/S Cal Sc : 2 Hrs , ES : 4 Hrs

# Gurukul Pvt. ITI

Manglam City, Kalwar Road, Jaipur

Trade -ELECTRICIAN				
Syllabus Breakup Daily				
Week	Day	Subject	Theory (02 hours)	Practical (05 hours)
34	1	Theory	Inspection and testing of wiring installations.	Estimate the cost/bill of material for wiring of hostel/ residential building and workshop.
	2		Inspection and testing of wiring installations.	Practice wiring of hostel and residential building as per IE rules.
	3	W/Shop calculation	Area and perimeter of square, rectangle and parallelogram -> Area an Perimeter of Triangle	Practice wiring of hostel and residential building as per IE rules.
	4	Engg. Drawing	Bars and profile sections -> Weld, Brazed and soldered joints	Practice wiring of hostel and residential building as per IE rules.
	5	ES	Different types of personal protective eaupment (PPE), Accident prevention techniques	Theory : 3 hrs - Special wiring circuit e.g. godown, tunnel and workshop etc. Extra curricular activity : 2 hrs
	6	ES	Care of injured & sick at the workplace first-acid & transportation of sick person Basic provisions of safety & health	Practice wiring of institute and workshop as per IE rules.

Total Week Hrs : 40 , Theory : 7 Hrs , Practical : 25 hrs , Engg. Drawing : 2 Hrs , W/S Cal Sc : 2 Hrs , ES : 4 Hrs

# Gurukul Pvt. ITI

Manglam City, Kalwar Road, Jaipur

Trade -ELECTRICIAN				
Syllabus Breakup Daily				
Week	Day	Subject	Theory (02 hours)	Practical (05 hours)
35	1	Theory	Special wiring circuit e.g. godown, tunnel and workshop etc.	Practice wiring of institute and workshop as per IE rules.
	2		Special wiring circuit e.g. godown, tunnel and workshop etc.	Practice wiring of institute and workshop as per IE rules.
	3	W/Shop calculation	Monthly Test WCS	Practice testing / fault detection of domestic and industrial wiring installation and repair.
	4	Engg. Drawing	Monthly Test ED	Practice testing / fault detection of domestic and industrial wiring installation and repair. (15 Hrs)
	5	ES	Monthly Test ES	Monthly Test theory
	6	ES	Introduction to environment, ecosystem and factors causing imbalance, pollution and pollutant including liquid, gaseous, solid and hazardous waste, protecting the environment-energy, conservation, ground water, global warming, responsibility about the environment, segregation and disposal of waste	Monthly Test Practical

Total Week Hrs : 40 , Theory : 7 Hrs , Practical : 25 hrs , Engg. Drawing : 2 Hrs , W/S Cal Sc : 2 Hrs , ES : 4 Hrs

# Gurukul Pvt. ITI

Manglam City, Kalwar Road, Jaipur

Trade -ELECTRICIAN				
Syllabus Breakup Daily				
Week	Day	Subject	Theory (02 hours)	Practical (05 hours)
36	1	Theory	Importance of Earthing. Plate earthing	Prepare pipe earthing and measure earth resistance by earth tester / megger. (10 Hrs)
	2		pipe earthing methods and IEE regulations.	Prepare pipe earthing and measure earth resistance by earth tester / megger. (10 Hrs)
	3	W/Shop calculation	Area and Perimeter of Circle, Semi-circle , circular ring, sector of circle, hexagon and ellipse	Prepare plate earthing and measure earth resistance by earth tester / megger. (10 Hrs)
	4	Engg. Drawing	Electrical and electronics element -> Piping joints and fitting	Prepare plate earthing and measure earth resistance by earth tester / megger. (10 Hrs)
	5	ES	Different actions people that affect other and the environment.	Theory : 3 hrs - Earth resistance and earth leakage circuit breaker. Extra curricular activity : 2 hrs
	6	ES	Types, causes & effects, areas in india that are prone to be affected, preparedness & mitigation, dos and don'ts-before, during and after any disaster, how to reduce man-made disasters.	Test earth leakage by ELCB and relay. (5 Hrs)

Total Week Hrs : 40 , Theory : 7 Hrs , Practical : 25 hrs , Engg. Drawing : 2 Hrs , W/S Cal Sc : 2 Hrs , ES : 4 Hrs

# Gurukul Pvt. ITI

Manglam City, Kalwar Road, Jaipur

Trade -ELECTRICIAN				
Syllabus Breakup Daily				
Week	Day	Subject	Theory (02 hours)	Practical (05 hours)
37	1	Theory	Laws of Illuminations.	Install light fitting with reflectors for direct and indirect lighting. (10 Hrs)
	2		Types of illumination system. Illumination factors, intensity of light.	Install light fitting with reflectors for direct and indirect lighting. (10 Hrs)
	3	W/Shop calculation	Surface area and Volume of solids- cube, cuboids, cylinder, sphere and hollow cylinder	Group different wattage of lamps in series for specified voltage. (5 Hrs)
	4	Engg. Drawing	Projections -> Concept of axes plane and quadrant	Practice installation of various lamps e.g. fluorescent tube, HP mercury vapour, LP mercury vapour, HP sodium vapour, LP sodium vapour, metal halide etc.
	5	ES	-> Concept of axes plane and quadrant	Theory : 3 hrs - Type of lamps, Extra curricular activity : 2 hrs
	6	ES	Self-Awareness, articulating personal values, value-based decision making, dilemma situations.	Practice installation of various lamps e.g. fluorescent tube, HP mercury vapour, LP mercury vapour, HP sodium vapour, LP sodium vapour, metal halide etc.

Total Week Hrs : 40 , Theory : 7 Hrs , Practical : 25 hrs , Engg. Drawing : 2 Hrs , W/S Cal Sc : 2 Hrs , ES : 4 Hrs



# Gurukul Pvt. ITI

Manglam City, Kalwar Road, Jaipur

Trade -ELECTRICIAN				
Syllabus Breakup Daily				
Week	Day	Subject	Theory (02 hours)	Practical (05 hours)
38	1	Theory	Type of lamps, advantages/ disadvantages and their applications.	Practice installation of various lamps e.g. fluorescent tube, HP mercury vapour, LP mercury vapour, HP sodium vapour, LP sodium vapour, metal halide etc.
	2		Type of lamps, advantages/ disadvantages and their applications.	Practice installation of various lamps e.g. fluorescent tube, HP mercury vapour, LP mercury vapour, HP sodium vapour, LP sodium vapour, metal halide etc.
	3	W/Shop calculation	Finding lateral surface area , total surface area and capacity in liters of hexagonal, conical and cylindrical shaped vessels	Prepare decorative lamp circuit using drum switches. (5 Hrs)
	4	Engg. Drawing	Projections -> Concept of axes plane and quadrant	Prepare decorative lamp circuit to produce rotating light effect/running light effect.
	5	ES	Identify sources and types of stress (positive/negative stress)	Theory : 3 hrs - Calculations of lumens and efficiency. Extra curricular activity : 2 hrs
	6	ES	Managing stress (long term/ short-term)	Install light fitting for show case lighting.

Total Week Hrs : 40 , Theory : 7 Hrs , Practical : 25 hrs , Engg. Drawing : 2 Hrs , W/S Cal Sc : 2 Hrs , ES : 4 Hrs

# Gurukul Pvt. ITI

Manglam City, Kalwar Road, Jaipur

Trade -ELECTRICIAN				
Syllabus Breakup Daily				
Week	Day	Subject	Theory (02 hours)	Practical (05 hours)
39	1	Theory	Classification of electrical instruments and essential forces required in indicating instruments.	Practice on various analog and digital measuring Instruments. (5 Hrs)
	2		PMMC and Moving iron instruments.	Practice on measuring instruments in single and three phase circuits e.g. multi-meter, Wattmeter, Energy meter, Phase sequence meter and Frequency meter etc.
	3	W/Shop calculation	Monthly Test WCS	Practice on measuring instruments in single and three phase circuits e.g. multi-meter, Wattmeter, Energy meter, Phase sequence meter and Frequency meter etc.
	4	Engg. Drawing	Monthly Test ED	Practice on measuring instruments in single and three phase circuits e.g. multi-meter, Wattmeter, Energy meter, Phase sequence meter and Frequency meter etc.
	5	ES	Monthly Test ES	Monthly Test theory
	6	ES	Handling rejection and building resilience, identify day wasters.	Monthly Test Practical

Total Week Hrs : 40 , Theory : 7 Hrs , Practical : 25 hrs , Engg. Drawing : 2 Hrs , W/S Cal Sc : 2 Hrs , ES : 4 Hrs

# Gurukul Pvt. ITI

Manglam City, Kalwar Road, Jaipur

Trade -ELECTRICIAN				
Syllabus Breakup Daily				
Week	Day	Subject	Theory (02 hours)	Practical (05 hours)
40	1	Theory	Measurement of various electrical parameters using different analog and digital instruments.	Measure power in three phase circuit using two wattmeter methods.
	2		Measurement of various electrical parameters using different analog and digital instruments.	Measure power factor in three phase circuit by using power factor meter and verify the same with voltmeter, ammeter and wattmeter readings.
	3	W/Shop calculation	Simple machines, Effort and load, mechanical advantage, velocity ratio, efficiency of machine	Measure power factor in three phase circuit by using power factor meter and verify the same with voltmeter, ammeter and wattmeter readings.
	4	Engg. Drawing	Orthographic projections	Measure electrical parameters using tong tester in three phase circuits.
	5	ES	Labour Welfare legislation:-Benefits guaranteed under various acts- Factories act, apprenticeship act, employees state insurance act(ESI), payment wages act.	Theory : 3 hrs - Measurement of energy in three phase circuit. Extra curricular activity : 2 hrs
	6	ES	Employees provident fund act, the workmen's compensation act, POSH. Interpret applicable labour and industrial laws.	Measure electrical parameters using tong tester in three phase circuits.

Total Week Hrs : 40 , Theory : 7 Hrs , Practical : 25 hrs , Engg. Drawing : 2 Hrs , W/S Cal Sc : 2 Hrs , ES : 4 Hrs

# Gurukul Pvt. ITI

Manglam City, Kalwar Road, Jaipur

Trade -ELECTRICIAN				
Syllabus Breakup Daily				
Week	Day	Subject	Theory (02 hours)	Practical (05 hours)
41	1	Theory	Errors and corrections in measurement.	Practice for range extension and calibration of various measuring instruments. (10 Hrs)
	2		Loading effect of voltmeter and voltage drop effect of ammeter in circuits.	Practice for range extension and calibration of various measuring instruments. (10 Hrs)
	3	W/Shop calculation	relation between efficiency	Determine errors in resistance measurement by voltage drop method.
	4	Engg. Drawing	Orthographic projections	Determine errors in resistance measurement by voltage drop method.
	5	ES	Quality management:-Create awareness on introduction of quality concepts.	Theory : 3 hrs - Extension of range and calibration of measuring instruments. Extra curricular activity : 2 hrs
	6	ES	Concept of Quality Management(QMS), PDCA, Fishbone,5s,5d, kaizen.	Test single phase energy meter for its errors.

Total Week Hrs : 40 , Theory : 7 Hrs , Practical : 25 hrs , Engg. Drawing : 2 Hrs , W/S Cal Sc : 2 Hrs , ES : 4 Hrs

# Gurukul Pvt. ITI

Manglam City, Kalwar Road, Jaipur

Trade -ELECTRICIAN				
Syllabus Breakup Daily				
Week	Day	Subject	Theory (02 hours)	Practical (05 hours)
42	1	Theory	Working principles and circuits of common domestic equipment and appliances.	Dismantle and assemble electrical parts of various electrical appliances e.g. cooking range, geyser, washing machine and pump set. (25 Hrs)
	2		Working principles and circuits of common domestic equipment and appliances.	Dismantle and assemble electrical parts of various electrical appliances e.g. cooking range, geyser, washing machine and pump set. (25 Hrs)
	3	W/Shop calculation	velocity ratio and mechanical advantage	Dismantle and assemble electrical parts of various electrical appliances e.g. cooking range, geyser, washing machine and pump set. (25 Hrs)
	4	Engg. Drawing	Method of first angle and third angle projections (definition and difference)	Dismantle and assemble electrical parts of various electrical appliances e.g. cooking range, geyser, washing machine and pump set. (25 Hrs)
	5	ES	Indtroducton of ISO	Theory : 3 hrs - Working principles and circuits of common domestic equipment and appliances. Extra curricular activity : 2 hrs
	6	ES	Preparation to the worid of work:-Identify the difference between job and carrer	Dismantle and assemble electrical parts of various electrical appliances e.g. cooking range, geyser, washing machine and pump set. (25 Hrs)

Total Week Hrs : 40 , Theory : 7 Hrs , Practical : 25 hrs , Engg. Drawing : 2 Hrs , W/S Cal Sc : 2 Hrs , ES : 4 Hrs

# Gurukul Pvt. ITI

Manglam City, Kalwar Road, Jaipur

Trade -ELECTRICIAN				
Syllabus Breakup Daily				
Week	Day	Subject	Theory (02 hours)	Practical (05 hours)
43	1	Theory	Working principles and circuits of common domestic equipment and appliances.	Service and repair of bell/ buzzer. (5 Hrs)
	2		Working principles and circuits of common domestic equipment and appliances.	Service and repair of electric iron, electric kettle, cooking range and geyser.
	3	W/Shop calculation	Lever and its types	Service and repair of electric iron, electric kettle, cooking range and geyser.
	4	Engg. Drawing	Method of first angle and third angle projections (definition and difference)	Service and repair of induction heater and oven. (10 Hrs)
	5	ES	Job roles available in respective trades	Theory : 3 hrs -Working principles and circuits of common domestic equipment and appliances. Extra curricular activity : 2 hrs
	6	ES	Awareness of industries, and the respective professional pathways.	Service and repair of induction heater and oven. (10 Hrs)

Total Week Hrs : 40 , Theory : 7 Hrs , Practical : 25 hrs , Engg. Drawing : 2 Hrs , W/S Cal Sc : 2 Hrs , ES : 4 Hrs

# Gurukul Pvt. ITI

Manglam City, Kalwar Road, Jaipur

Trade -ELECTRICIAN				
Syllabus Breakup Daily				
Week	Day	Subject	Theory (02 hours)	Practical (05 hours)
44	1	Theory	Working principles and circuits of common domestic equipment and appliances.	Service and repair of mixer and grinder. (10 Hrs)
	2		Concept of Neutral and Earth.	Service and repair of mixer and grinder. (10 Hrs)
	3	W/Shop calculation	Quarterly Test WCS	Service and repair of washing machine.
	4	Engg. Drawing	Quarterly Test ED	Service and repair of washing machine.
	5	ES	Quarterly Test ES	Quarterly Test theory
	6	ES	Awareness of higher education/education/up skilling (short-term) options Steps involved in online application for instructor course,	Quarterly Test Practical

Total Week Hrs : 40 , Theory : 7 Hrs , Practical : 25 hrs , Engg. Drawing : 2 Hrs , W/S Cal Sc : 2 Hrs , ES : 4 Hrs

# Gurukul Pvt. ITI

Manglam City, Kalwar Road, Jaipur

Trade -ELECTRICIAN				
Syllabus Breakup Daily				
Week	Day	Subject	Theory (02 hours)	Practical (05 hours)
45	1	Theory	Working principle, construction and classification of transformer.	Verify terminals, identify components and calculate transformation ratio of single phase transformers.
	2		Single phase and three phase transformers.	Verify terminals, identify components and calculate transformation ratio of single phase transformers.
	3	W/Shop calculation	Measurement of Angle, Trigonometrical Ratios	Perform OC and SC test to determine and efficiency of single phase transformer.
	4	Engg. Drawing	Symbol of 1st angle and 3rd angle projection in 3rd angle.	Perform OC and SC test to determine and efficiency of single phase transformer.
	5	ES	apprenticeship and different jobs in popular site like the indiagobs.com, naukari.com, monsterindian.com, GOVT.website.	Theory : 3 hrs - Turn ratio and e.m.f. equation. <b>Parents instructor meeting: 2 hrs</b>
	6	ES	forms of greeting	Perform OC and SC test to determine and efficiency of single phase transformer.

Total Week Hrs : 40 , Theory : 7 Hrs , Practical : 25 hrs , Engg. Drawing : 2 Hrs , W/S Cal Sc : 2 Hrs , ES : 4 Hrs



# Gurukul Pvt. ITI

Manglam City, Kalwar Road, Jaipur

Trade -ELECTRICIAN				
Syllabus Breakup Daily				
Week	Day	Subject	Theory (02 hours)	Practical (05 hours)
46	1	Theory	Series and parallel operation of transformer.	Perform OC and SC test to determine and efficiency of single phase transformer.
	2		Voltage Regulation and efficiency.	Perform OC and SC test to determine and efficiency of single phase transformer.
	3	W/Shop calculation	Trigonometric Table	Perform series and parallel operation of two single phase transformers.
	4	Engg. Drawing	Orthographic projection from isometric projection	Perform series and parallel operation of two single phase transformers.
	5	ES	Use of positive body language	Theory : 3 hrs - Auto Transformer and instrument transformers (CT & PT). Extra curricular activity : 2 hrs
	6	ES	Handling grievances (Use of ask-listen-repeat technique)	Verify the terminals and accessories of three phase transformer HT and LT side.

Total Week Hrs : 40 , Theory : 7 Hrs , Practical : 25 hrs , Engg. Drawing : 2 Hrs , W/S Cal Sc : 2 Hrs , ES : 4 Hrs

# Gurukul Pvt. ITI

Manglam City, Kalwar Road, Jaipur

Trade -ELECTRICIAN				
Syllabus Breakup Daily				
Week	Day	Subject	Theory (02 hours)	Practical (05 hours)
47	1	Theory	Method of connecting three single phase transformers for three phase operation.	Perform 3 phase operation (i) delta-delta (ii) delta-star (iii) star-star (iv) star-delta by use of three single phase transformers.
	2		protective devices, bushings and termination etc. Testing of transformer oil.	Perform testing of transformer oil.
	3	W/Shop calculation	Trigonometry-Application in calculating height and distance	Practice on winding of small Transformer.
	4	Engg. Drawing	Orthographic projection from isometric projection	Practice on winding of small transformer.
	5	ES	Relationship building with customers, importance of probing.	Types of Cooling, Extra curricular activity : 2 hrs
	6	ES	Use of open-ended/close-ended questions to gauge requirement.	Practice of general maintenance of transformer.

Total Week Hrs : 40 , Theory : 7 Hrs , Practical : 25 hrs , Engg. Drawing : 2 Hrs , W/S Cal Sc : 2 Hrs , ES : 4 Hrs

# Gurukul Pvt. ITI

Manglam City, Kalwar Road, Jaipur

Trade -ELECTRICIAN				
Syllabus Breakup Daily				
Week	Day	Subject	Theory (02 hours)	Practical (05 hours)
48	1	Theory	Materials used for winding and winding wires in small transformer.	Practice on winding of small transformer.
	2		Materials used for winding and winding wires in small transformer.	Practice on winding of small transformer.
	3	W/Shop calculation	Quarterly Test WCS	Practice on winding of small transformer.
	4	Engg. Drawing	Quarterly Test ED	Practice on winding of small transformer.
	5	ES	Quarterly Test ES	Quarterly Test theory
	6		Industrial Visits Industrial Visits	Industrial Visits

Total Week Hrs : 40 , Theory : 7 Hrs , Practical : 25 hrs , Engg. Drawing : 2 Hrs , W/S Cal Sc : 2 Hrs , ES : 4 Hrs

# Gurukul Pvt. ITI

Manglam City, Kalwar Road, Jaipur

Trade -ELECTRICIAN				
Syllabus Breakup Daily				
Week	Day	Subject	Theory (02 hours)	Practical (05 hours)
49	1	Theory	Revision	Project Work
	2		Revision	Project Work
	3	W/Shop calculation	Trigonometry-(Simple Applications)	Project Work
	4	Engg. Drawing	Reading of fabrication drawing	Project Work
	5	ES	Revision	Theory : 3 hrs - .Revision <b>Parents instructor meeting: 2 Hrs</b>
	6		Industrial Visits	Industrial Visits

## 48-49 **Project work / Industrial visits Broad Areas:**

- Overload protection of electrical equipment
- Automatic control of street light/night lamp
- Fuse and power failure indicator using relays
- Door alarm/indicator
- Decorative light with electrical flasher

## 50-51 **Revision**

## 52 **Examination**

Total Week Hrs : 40 , Theory : 7 Hrs , Practical : 25 hrs , Engg. Drawing : 2 Hrs , W/S Cal Sc : 2 Hrs , ES : 4 Hrs