

দিশা | DISA পরিচালিত
একটি সামাজিক উদ্যোগ

দিশা ইনস্টিটিউট অব সাইন্স এন্ড টেকনোলজি (ডিআইএসটি)

প্লট নং-৪৫, রোড নং-০৭, ব্লক-এ, মিরপুর, সেকশন-১২, পল্লবী, ঢাকা-১২১৬

ভর্তি সংক্রান্ত বিষয় : ০১৭০৮৪৪৯৯৫০, অধ্যক্ষ : ০১৭০৮৪৪৯৯৬৭, উপসেতা : ০১৭০৯৩৮৯০৯৫

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SHORT TRAINING PROGRAMME

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Short Training Course:Cost sheet

| Department | SL no | Name of the course | Duration (weeks) | Course fee | | Total | Remarks |
|----------------------------------|-------|---|------------------|------------|-------------------------------|----------|---------|
| | | | | Training | Hostel (Accommodation & food) | | |
| Electrical | 1 | Electrical House Wiring | 4 | 8,000/- | 6000/- | 14,000/- | |
| | 2 | Electrical Motor Winding | 4 | 12,000/- | 6,000/- | 18,000/- | |
| | 3 | Industrial Electricity | 4 | 12,000/- | 6,000/- | 18,000/- | |
| | 4 | Advanced Electrical Installation and Maintenance | 2 | 20,000/- | 3,000/- | 23,000/- | |
| Motorcycle | 5 | Battery Technician | 4 | 10,000/- | 6,000/- | 16,000/- | |
| | 6 | Motorcycle Electrical and electronics Maintenance | 4 | 10,000/- | 6,000/- | 16,000/- | |
| | 7 | Motorcycle Servicing | 4 | 8,000/- | 6,000/- | 14,000/- | |
| Refrigeration & Air-Conditioning | 8 | Refrigeration & Air-Conditioning | 8 | 16,000/- | 12,000/- | 28,000/- | |
| | 9 | Refrigerator | 4 | 8,000/- | 6,000/- | 14,000/- | |
| | 10 | Window & Split Air-Conditioner | 4 | 10,000/- | 6,000/- | 16,000/- | |
| | 11 | Water Chiller | 2 | 12,000/- | 3,000/- | 15,000/- | |
| | 12 | Advanced Refrigeration & Air-Conditioning | 2 | 20,000/- | 3,000/- | 23,000/- | |
| | 13 | Computer MS office | 8 | 8,000/- | 12,000/- | 20,000/- | |
| | 14 | Graphic design, Photoshop/Illustrator | 8 | 10,000/- | 12,000/- | 22,000/- | |

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|----------------------------------|----|---|---|-----------|----------|----------|--|
| Computer | 15 | Web Page Design & Outsourcing | 8 | 14,000/- | 12,000/- | 26,000/- | |
| | 16 | Computer Networking | 8 | 12,000/- | 12,000/- | 24,000/- | |
| | 17 | Computer Hardware Maintenance | 8 | 12,000/- | 12,000/- | 24,000/- | |
| | 18 | Auto CAD (Mechanical) | 8 | 12,000/- | 12,000/- | 24,000/- | |
| | 19 | Auto CAD (Civil) | 8 | 12,000/- | 12,000/- | 24,000/- | |
| Plumbing | 20 | Plumbing: (Pipe fitting & sanitary works) | 4 | 8,000/- | 6,000/- | 14,000/- | |
| | 21 | Fire Fighting (Water pipe line) | 2 | 8,000/- | 3,000/- | 11,000/- | |
| Civil Construction | 22 | Steel fixer/ Rod binding | 4 | 8,000/-/- | 6,000/- | 14,000/- | |
| | 23 | Shutter carpenter | 4 | 8,000/-/- | 6,000/- | 14,000/- | |
| | 24 | Masonry (Plaster, bricks & hollow blocks seating) | 4 | 8,000/- | 6,000/- | 14,000/- | |
| | 25 | Masonry (Tiles & marble stone fixing) | 4 | 16,000/- | 6000/- | 22,000/- | |
| | 26 | Masonry (Mosaic, tiles, marble stone & ceramics brick fixing) | 8 | 20,000/- | 12,000/- | 32,000/- | |
| | 27 | Painting (Building & spray) | 4 | 10,000/- | 6,000/- | 16,000/- | |
| | 28 | Painting (Metal spray) | 4 | 10,000/- | 6,000/- | 16,000/- | |
| Mechanical | 29 | Welding: Arc (1G – 4G) | 4 | 25,000/- | 6,000/- | 31,000/- | |
| | 30 | Welding: MIG | 1 | 20,500/- | 1,500/- | 22,000/- | |
| | 31 | Welding: TIG (Normal) | 1 | 20,500/- | 1,500/- | 22,000/- | |
| | 32 | Welding: TIG (Pipe) | 1 | 25,500/- | 1,500/- | 27,000/- | |
| | 33 | Welding (Gas) | 2 | 13,000/- | 3,000/- | 16,000/- | |
| | 34 | Steel fabricating (Welding & metal work) | 8 | 40,000/- | 12,000/ | 42,000/- | |
| | 35 | Turning (Lathe & Drill) | 8 | 25,000/- | 12,000/- | 37,000/- | |
| | 36 | Milling operation | 8 | 25,000/ | 12,000/- | 37,000/ | |
| | 37 | Mechanical fitting | 8 | 18,000/- | 12000/- | 30,000/- | |
| | 38 | Drawing & Design (Mechanical) | 4 | 16,000/- | 6,000/- | 22,000/- | |
| | 39 | Machine shop practice (Lathe, Drill, Milling, Shaper & Grinding Machine Operation) | 8 | 30,000/- | 12,000/- | 42,000/- | |
| RMG (Ready Made Garments) | 40 | Sewing Machine Operation | 4 | 10,000/- | 6,000/- | 16,000/- | |
| | 41 | Tailoring & Dress Making | 4 | 8,000/- | 6,000/- | 14,000/- | |

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| Managem ent & Others | 42 | Workshop Management | 1 | 10,000/- | 2,000/- | 12,000/- | |
| | 43 | Technical School Management | 1 | 10,000/- | 2,000/- | 12,000/- | |
| | 44 | Spoken English | 4 | 8,000/- | - | 8000/- | |
| | 45 | House Keeping | 4 | 10,000/- | 6,000/- | 16,000/- | |
| | 46 | Occupational Safety, Health & Environment | 3 (days) | 7,000/- | Negotiable | 7,000/- | |
| | 47 | Safety in industry | 3 (days) | 7,000/- | Negotiable | 7,000/- | |
| | 48 | Tailor Made | As per need | Negotiable | | | |

DIST

Course No-01
Electrical house wiring
4 (Four) Weeks Training Program

| Day / Week | 1 st | 2 nd | 3 rd | 4 th |
|------------|--|---|---|---|
| Sat | Safety method of works. Safety rules and precautions. Primary electric shock treatment. Introduction and use of electrical hand tools and equipments. | Bulb connection. Series circuit. Parallel circuit etc. | Tube light connection and testing, concept of PVC trucking wiring. | Three phase Motor connection. Push button switch Magnetic starter. Reverse forward switch. Auto star delta starter. Magnet and Magnetism. |
| Sun | Electrical conductor and insulator. Wires and cable joint and soldering (practice) Concept about house wiring. | Series and parallel combined circuit. Bulb connection one-two-three. | Batten wiring. Channel wiring. Electrical plan. House wiring and practical. IPS connection. | Change over switch. Single phase Motor, Fan connection. Universal Motor, Capacitor start M. C, Capacitor Start and Run Motor Connection. |
| Mon | Surface wiring. Concealed wiring. Measurement electrical symbols, Circuit diagram, | Series circuit. Parallel circuit. combined Circuit. Verities bulb connection | Diagram of electrical plan. Surface conduit wiring. Concealed conduit wiring. Conduit size. | Hand drill and hand grinding M. connection. Shaded pole Motor c. Electric iron, Auto light controller, |
| Tue | Bulb connection- one-two-three etc. Basic electricity theory. Structure of atom. Electricity A.C and D.C. | 5 Ampere socket connection Fan connection with regulation. | Analog AVO meter Digital multi meter. AVO Use of analogue and digital clamp meter. Volt meter, | Three phase three wire meter & Three phase four wire E.M. connection. |
| Wed | Electric current voltage resistance and power. AC circuit. Cycle. Frequency. Single phase circuit. | Verities Bulb connection Fan connection 5 Ampere socket connection. Calling bell connection. PVC trucking wiring. | Ampere meter, Energy meter. Concept about Wires and conduct size, | A.C. generator, Battery connection and practical, Charging solar cell system and practical. Concept about transmission & distribution system (Over head line). |
| Thu | Three phase circuit. Ohm's law of mathematics. Kerchief's laws. | 15 Ampere socket maintain by 15 A switch with circuit breaker. Combined socket connection with circuit breaker. Verities circuit connection. | Power and energy measuring system. Use of mugger and practical. Insulation resistance test. | Electrical insulation & maintenance system, review or discussion of the whole system. Certificate distribution |

Course No-02
Electrical motor winding
4 (Four) Weeks Training Program

| Day / Week | 1st | 2nd | 3rd | 4th |
|-------------------|--|---|--|---|
| Sat | Safety method of works. Operation use and maintenance of electrical hand tools and equipment. Electricity AC. & DC. | Different types of capacitor. Capacitor start Motor. | Pedestal fan re-winding. Table fan re-winding. Running coil and auxiliary coil connection. | Three phase Motor re-winding practice. Back side taping. |
| Sun | Motor re-winding device and re-winding device and appliances fiber, cotton tape etc. | Capacitor start and run Motor connection practice. Capacitor run Motor, field coil re-winding. | Table fan re-winding practice. Shaded pole Motor. Universal Motor. Re-winding practice. | Connection and ball testing. Three phase Motor connection lead side taping and end plate fitting. |
| Mon | Different types of single and three phase induction Motor. Data sheet of single and three phase Motor. | Ceiling fan re-winding practice. Ceiling fan re-winding practice | Universal Motor and transformer theory and practical. Transformer re-winding practice. | Switch connection and final testing. |
| Tue | Principle of single and three phase Motor winding-basket, Chain, Diamond winding. Forma- Round forma Step round forma etc. | Capacitor testing and connection. Fan regulator re-winding and connection. | Two phase Motor and two speed Motor connection diagram. | Three phase Motor R.P.M. test, Load test. Mathematical calculation of power, voltage and current. |
| Wed | Super enamel wire size (0.05mm - 2.99m.m) Motor opening and fibrins practice. Split phase motor winding practice. | Fan regulator ante, fibrin and re-opening winding practice. | Another Motor diagram practice. Three phase induction Motor theory. | Use of analogue and digital multi meter meager testing etc. |
| Thu | Split phase Motor winding and connecting practice. Running coil connection. Starting coil connection. Centrifugal switch connection. | Pedestal fan re-winding practice. Regulating switch connection. Blower fan re-winding practice. | Data sheet of three phase Motor, open and cleaning. Insulating and re-winding practice. | Electrical motor burnishing and maintenance system. Review of the whole course. |

Course No-03
Industrial electricity
4 (Four) Weeks Training Program

| Day / Week | 1 st | 2 nd | 3 rd | 4 th |
|------------|--|--|--|--|
| Sat | Safety method of works. Safety rules and precautions. Electric shock treatment. | Single phase Motor connection. Three phase Motor connection. Fan, Tube light, Calling bell Connection. | PDB & generator connection by changeover switch. Concepts of limit switch, float switch, micro switch and its connection with motor starter. | Concepts about Industrial Electrical installation and maintenance system. |
| Sun | Industrial safety. Fundamental electricity theory. Current, voltage, resistance, conductor, semi conductor, insulator etc. | Electrical connection diagram and operation Ammeter, Voltmeter, Frequency meter, Power factor meter, Meager, etc. | Control of water pump by float switch. Traffic / Road signal light control ckt connection. | General principle of A.C generator. Single phase and three phase generator. Operation and |
| Mon | Alternating and direct current (AC, DC) Series and parallel circuits. | Concepts of electrical device, Appliance and accessories and wiring practice. Introduction of Direct-on-line starter (DOL) and its connection. | Reverse forward and inch ckt connection. Automatic PDB and generator line change over circuit connection. Illumination system. | maintenance system. Maintenance system of single phase and three phase generator. |
| Tue | Concept of electric hand tools. Concept of electric equipment. Cable joint and soldering. | Earth connection, concepts about magnetic starter, magnetic starter connection (DOL ckt), jogging/inch connection of starter. | Surface grinding machine control ckt connection. Overload relay, timer, circuit breaker etc. connection and practice. | Safety precaution for generator. Single phase and three phase KWH Meter connection. |
| Wed | Ohm's law and mathematics. Kerchiefs law. | Reverse forward ckt. connection manual & automatic. | Introduction of AC Transmission and distribution system. H.T switch gear. | Lead Acid battery, testing and connection. Safety precaution for generator. |
| Thu | Electrical measuring instrument and practical. (Analogue and Digital multi meter) Clip on test meter (Digital and analogue). | Auto star Delta starter connection. Concepts about overload relay, trimmer. | Transformer (H.T & L.T) LT Panel board and distribution system. Concept of earthling. | Basic electronic, Diode, rectifier, resistor, capacitor, transistor etc. Soldering system. Color code. |

Course No-04
Advanced Electrical Installation & Maintenance
2 (Two) Weeks Training Program

| Day / Week | 1st | 2nd |
|-------------------|--|---|
| Sat | Electrical Safety Rules and precautions. Fundamental electricity theory. Ohms Law and Mathematics. | Electrical machine connection procedure. Welding Machine, Mig, and Tig connection. Hand Drill and Hand grinding Machine |
| Sun | Cable joint. Concept of AVO Meter (Analogue & Digital) Ampere Meter, Volt Meter, Hz Meter, KWH Meter, Connection. | connection and practice. Limit switch. A.C Transmission and distribution system. H.T. |
| Mon | Earth testing by Meager. Wiring practice. Electric Cable size calculation. Electrical symbol. | Switch Gear. Transformer (H.T & L.T) L.T Panel Board and distribution system. Concept of earthing. |
| Tue | Electrical Drawing practice. House wiring trouble shooting and Remedy. Load calculation. | General principle of A.C Generator. Single phase and three phase generator. Operation and Maintenance system. Lead Acid Battery test and connection. |
| Wed | Fan, Tube light, Calling Bell connection. Three phase Motor connection by Star Delta starter. | Basic Electronic, Diode, Rectifier, Resistor, Capacitor, Transistor etc. Soldering system. Installation & maintenance of solar home system. |
| Thu | Trouble shooting and Remedy Fan, Single and three phase Motor, Magnetic conductor. | Electrical installation and maintenance system. Review or discussion of the whole course. Certificate distribution. |

Course No-32
Welding Gas
2 (Two) Weeks Training Program

| Day / Week | 1st | 2nd |
|-------------------|---|--|
| Sat | I Introduction of gas welding & its equipment. Gas welding flame & safety. | Introduction of different types of joint. Gas welding practice T-ee joint. |
| Sun | Gas welding practice on fusion bead. | Knowledge about Gas welding flux & their function. |
| Mon | Demonstration of Gas welding sets. Welding practice on straight bead. | Gas welding practice horizontal position. |
| Tue | Different types of filler rod & their uses. Welding practice on butt joint. | Different types of nozzle and their uses. Welding practice vertical position. |
| Wed | Different types of metal preparation. Gas welding practice lap joint. | Gas welding practice on Brazing. |
| Thu | Relation between base metal & filler rod. Welding practice on corner joint. | Gas cutting theory. Gas welding and cutting practice straight & round cutting. |

Course No-05
Battery technician
4 (Four) Weeks Training Program

| Day / Week | 1st | 2nd | 3rd | 4th |
|-------------------|---|--|---|--|
| Sat | Introduction to electric power supply AC, DC supply, single phase supply. | Tools and equipment require to work with lead acid battery. Use of each tools and equipment. | Battery setting in the car and battery maintenance practice. | Battery charging : Trickle charging. |
| Sun | source of AC and DC, voltage range of AC and DC. | Magnet, Battery capacity determination, sulphation of battery. | Battery parallel and series connection. Battery setting with the generator. | Slow charging and Quick charging. |
| Mon | Electricity, current, voltage, resistance, measurement of resistance, current and voltage. Identification of AC and DC. | Practice of finding (+)ve and (-)ve terminal of lead-acid battery. | Use of AVO meter and Hydrometer. | Battery charge in the car. Observation of charging ckt. components in a car. |
| Tue | Ckt. Series ckt, parallel ckt, practice on series ckt and parallel ckt, series -parallel ckt, Demonstration on series ckt, parallel ckt, series - parallel ckt. | Terminal condition and connecting with load and capacity of lead acid battery. | Effect of battery connection in series and parallel. | Battery charging components, function and connection. |
| Wed | Introduction to battery, types of battery, construction of battery. | Electrolyte making. Precaution and practice of battery electrolyte making. | Practice of cell tester load tester and fault finding of battery. | Practice of connection of auto charging in the car. |
| Thu | Safety practice of lead acid battery, Battery parts identification and function of each parts. | Battery operation and battery specification. | Manufacturing of lead acid battery, terminal repairing. Use of blow lamp. | Battery faults finding and Revision. |

Course No-06
Motorcycle electrical and electronics maintenance
4 (Four) Weeks Training Program

| Day / Week | 1st | 2nd | 3rd | 4th |
|-------------------|--|---|---|--|
| Sat | Introduction about Motorcycle. Introduction of occupational Safety and health (OSH) | Use of Avo meter | Adjust Ignition timing & CB point gap and speak plug gap | head light ckt wiring by battery |
| Sun | Identify tools and Spares parts | Soldering Practice | Identify and servicing CD/Ignition system | Knowledge of park light, back light brake light ckt |
| Mon | Use of tools | Knowledge and skills of 12-Volt battery charger | Identify and servicing battery charging system, voltage regulator and rectification | Knowledge of self starting ckt & relay or solenoid switch |
| Tue | Electrical wires and cable joint practice | Knowledge and skills of battery charging and discharging system & test electivity gravity | Test switch & connection | Knowledge of self starting ckt & relay or solenoids switch |
| Wed | Knowledge of Electrical current, voltage, resistance and power | Identify magneto Ignition System | Identify and servicing turn Indicator Ckt and flashing system | Knowledge of dash board lighting system & gear position neutral position ckt |
| Thu | Electrical symbols & Circuit diagram. Application of basic electronics component | Test Ignition switch Ignition coil, lighting coil & Ignition coil | Head light ckt using by lighting coil | revision of certificate distribution |

Course No-07

Motorcycle servicing

4 (Four) Weeks Training Program

| Day / Week | 1 st | 2 nd | 3 rd | 4 th |
|------------|---|--|---|---|
| Sat | Introduction to Motor cycle. Occupational Safety and health (OSH) in Motor cycle repairing and work place. | Details demonstration on the petrol Fuel system. Carburetor parts identification and function different circuit of carburetor. | Details demonstration on the Suspension system. Front and rear shock absorber disassembly re-assembly and servicing practice. | Low tension magneto ignition circuit practice. Contact barker (C.B) point and spark plug gap adjustment. |
| Sun | Identification and introduction on motor cycle systems: (1) Body (2) Chassis (3) Engine. | Venture of carburetor. Air fuel ratio. Carburetor float, slow running adjust practice and fuel system servicing. | Details demonstration on the Steering system. Steering system disassembly re-assembly and servicing practice. | Ignition timing adjustment. CDI, ignition circuit practice faults finding & repairing. |
| Mon | (4) Fuel (5) Cooling (6) Lubricating (7) Brake (8) Suspension (9) Steering (10) Power transmission (11) Electrical and Electronic (12) Wheel and Tier. | Details demonstration on the Cooling . Type of cooling system. Component of cooling system and their function. Cooling system servicing. | Details demonstration on the Power Transmission system. Types of clutch, Components of clutch. Clutch disassembly re-assembly and servicing practice. | Motor cycle electrical circuit practice. Such as horn, head light, indicating brake, park, hazard electrical motor starting and battery charging circuit battery maintenance and topping up practice. |
| Tue | Details demonstration on the Body system, Chassis system and Engine system. Engine part's identification and their function. | Details demonstration on the Lubricating system. Type of lubricating system. Component of lubricating system and their function. Types of lubricants. Fault finding and repair. | Identification and introduction of gearbox component. Gearbox disassembly, re-assembly and servicing practice. Drive chain & sprocket servicing and adjustment. | Details demonstration on the Wheel and tyre system. Tube disassembly and re-assembly Tube vulcanizing. Wheel balancing practice. |
| Wed | Classification of engine. Difference between petrol and diesel engine. Principle of engine operation (2 and 4 stroke petrol engine). | Details demonstration on the Brake system. Types of two wheeler brake system. Component of brake system, identification and their function. | Details demonstration on the Electrical and Electronics system. | Details demonstration on the Engine overhauling practice. Such as piston and piston ring disassembly, piston ring gap check, valve lapping engine timing and tappet clearance. |
| Thu | Finding T.D.C. & B. D.C. Valve timing practice. Tappet clearance and measurement practice. | Details demonstration on the Mechanical and hydraulic brake system. Disassembly, re-assemble servicing adjustment of brake system. | Identification of ignition system. Types of ignition system. Function of ignition. Component of ignition and their function. | Motor cycle general servicing practice, revision & Examination |

Course No-08

Refrigeration & Air Conditioning 8 (Eight) Weeks Training Program

| Day / Week | 1 st | 2 nd | 3 rd | 4 th |
|------------|---|--|---|--|
| Sat | Introduction to refrigeration and air conditioning. Definitions and units of heat, temp & pressure. Identification of different refrigeration equipment available in RAC shop. | Practice measuring pressure, demonstration on compound gauge, high pressure gauge, double gauge manifold; use and care of charging hoses. Demonstration on the use of analog & digital AVO meter, Ampere meter, multi meter. | Start a 3 phase motor with starter and ckt. breaker; Start a 3 phase motor in reverse and forward motion; star and delta connection of 3 phase motor; transformer. | Identify the electrical components used in non frost refrigerator freezer, check for its proper function, check timer, defrost thermostat, thermal fuse, lamp & fan switch and other components. |
| Sun | List of special cooling equipment. Identification of common hand tools, measuring tools; special tools & measuring tools and materials used in refrigeration and air conditioning work. | Definition of electricity, current, voltage and resistance, units, explanation of ohm's law. Source of electric current; use of voltage stabilizer, volt guard, measuring practice of voltage, current and resistance. | Check transformer resistance, continuity, ground voltage input and output. Compressor dome cutting, identification of interior parts, identification of faults, remedies and setting the dome for welding & charging oil; checking pumping & motor condition. | Connect all components for operation. Demonstration on the function of timer, heater, defrost thermostat, fan and lamp- fan switch; thermostat etc. |
| Mon | Practice and use of hand tools and measuring tools used in RAC works, measuring diameter, thickness, length, area and volume in SI and metric system. | Electrical wiring for series board, use of series board for continuity, resistance and grounding. Identify electrical fitting required in refrigeration and air conditioning work. | Identify different types of relay, test/check relay, OLP, capacitor, thermostat, pressure cutout. | Repeat the above on the refrigerator freezer. Check wiring of chest type freezer, disconnect all wiring and reconnect it; check and inspects if any mistake. Operate for cooling. |
| Tue | Demonstration on the operation of refrigeration cycle. | Specification of electrical fittings, Demonstration on three phase & single phase power supply system. | Demonstration on magnetic contractor. Making wiring of frosted refrigerator freezer on the table; check wiring of a frosted type domestic refrigerator freezer. | Check wiring of a water cooler, operate for its proper function, detect fault if any, check cooling & automatic operation. |
| Wed | Introduction to refrigeration piping and fittings; Identify refrigeration fitting, identify with appropriate measurement; Identify water line fittings of central air-conditioning plant. | Introduction to electrical circuit, series ckt, parallel ckt, making series ckt, and parallel ckt, effect of series ckt and parallel ckt, measuring voltage drop on each resistance. | Starting the refrigerator freezer. Check Ampere & cooling. | Factors to be considered for installation & operation. Identify different types of water cooler. |
| Thu | Introduction to copper tube cutting, bending, flaring, swaging, brazing, welding. | Demonstration on single phase motor, identify different types of motors, three phase | Making wiring of auto defrost refrigerator- freezer on the table-testing for its operation, | Check beverage cooler, check for compressor motor, fan motor, operate for cooling, |

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|--|--|---|---|---|
| | Practice on copper tube cutting, bending, flaring, swaging and brazing; welding-brazing, practice on copper & copper; copper & steel; steel & steel etc. Soldering practice. | motors; starting methods of motors; terminal identification of compressor motor, motor starting without relay and capacitor; starting with relay & capacitor. | make check the wiring of defrosted type refrigerator-freezer. | and operate for automatic operation. Check up right freezer for its function. |
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| Day / Week | 5 th | 6 th | 7 th | 8 th |
|------------|--|---|--|---|
| Sat | Test leak in a refrigerator-freezer, repair leak if any; Evacuate and charge appropriate refrigerant. | Check refrigerant in the split type air conditioner; charge refrigerant if part charge required. Check leak if empty. Evacuate if full charge required then charge refrigerant. | Identification of air-conditioner. Check electrical ckt, leak test, evacuation and refrigerant charging. | Refrigerator Skills Test |
| Sun | Refrigerant, types of refrigerant, CFC, HCFC, HFC, HC & HC blend. Refrigerant handling. Identify the electrical components of a window type air conditioner. | Introduction to different types of air conditioner; mention the advantages and disadvantages of split type over package type. | Repairing : Domestic refrigerator freezer (Frosted type). | Window air-conditioner Skills Test |
| Mon | Check and connect all the components. Check selector switch, fan motor, compressor motor reconnect and operate. | Mention the advantages and disadvantages over window type. Operate for its function. Check for its performance. | Repairing : Non Frost type refrigerator Freezer. | Split air-conditioner Skills Test |
| Tue | Operate window cooler for operation, check the effect of voltage, cooling and correct operation; test for thermostat; charge refrigerant. | Service the condenser & other components; check wiring. Identify the components of central air conditioning plant. | Repairing Water cooler / Water dispenser. | Refrigerator Fault finding, remedy, repair maintenance & servicing |
| Wed | Identify the components of split type air condition; study the name plate, check for cooling capacity, FLA, voltage and other information; operate if running; check ampere. | Identify refrigeration components, condenser cooling water components, operating switches and operating procedure. | Good practice in refrigeration and air conditioning. | Air-conditioner fault finding, remedy, repair maintenance & servicing Introduction of different air-conditioners |
| Thu | Check the wiring of split type AC on demonstration model, operate the electrical ckt, check wiring on the installed unit, compare the model ckt and the installed ckt. | Identify refrigeration components, condenser cooling water components, operating switches and operating procedure. | Good practice in refrigeration and air conditioning. | Revision & Certificate Distribution |

Course No-10
Refrigerator
4 (Four) Weeks Training Program

| Day / Week | 1st | 2nd | 3rd | 4th |
|-------------------|---|---|---|---|
| Sat | Introduction to refrigeration and air conditioning. Definitions and units of heat, temp & pressure. Identification of different refrigeration equipment available in RAC shop. List of special cooling equipment. | Demonstration on compound gauge, high pressure gauge, double gauge manifold; use and care of charging hoses. Demonstration on the use of analog & digital AVO meter, Ampere meter, multi meter. | Start a 3 phase motor with starter and ckt. breaker; Start a 3 phase motor in reverse and forward motion; star and delta connection of 3 phase motor; transformer, check transformer resistance, continuity, ground | Demonstration on the function of timer, heater, defrost thermostat, fan and lamp- fan switch; thermostat etc. Repeat the above on the refrigerator freezer. |

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| | | | voltage input and output. | |
| Sun | Identification of common hand tools, measuring tools; special tools & measuring tools and materials used in refrigeration and air conditioning work. | Define of electricity, current, voltage and resistance, units, explanation of ohm's law. Source of electric current; use of voltage stabilizer, volt guard, measuring practice of voltage, current and resistance. | Compressor dome cutting, identification of interior parts, identification of faults, remedies and setting the dome for welding & charging oil; checking pumping & motor condition. | Check wiring of chest type freezer, disconnect all wiring and reconnect it; check and inspects if any mistake. Operate for cooling. |
| Mon | Practice and use of hand tools and measuring tools used in RAC works, measuring diameter, thickness, length, area and volume in SI and metric system. Demonstration on the operation of refrigeration cycle. | Electrical wiring for series board, use of series board for continuity, resistance and grounding. Identify electrical fitting required in refrigeration and air conditioning work. Specification of electrical fittings, Demonstration on three phase & single phase power supply system. | Identify different types of relay, test/check relay, OLP, capacitor, thermostat, pressure cutout. Demonstration on magnetic contractor. | Mention the advantages and disadvantages over window type. Repair, maintenance and servicing of window Type air-conditioner. |
| Tue | Introduction to air-conditioning piping and fittings; Identify Ac fitting, identify with appropriate measurement. | Demonstration on three phase & single phase power supply system. | Making wiring of window type air-conditioner on the table; check wiring of window Ac. Starting the window AC. Check Ampere & cooling. | Refrigerator repair, maintenance & servicing practice |
| Wed | Introduction to copper tube cutting, bending, flaring, swaging, brazing, welding. Practice on copper tube cutting, bending, flaring, swaging. | Introduction to electrical circuit, series ckt, parallel ckt, making series ckt, and parallel ckt, effect of series ckt and parallel ckt, measuring voltage drop on each resistance. | Making wiring of split type Air-conditioner on the table, testing for its operation, make check the wiring of split type Ac. | Refrigerator Fault finding, remedy, repair maintenance & servicing |
| Thu | Welding practice on copper tube cutting, bending, flaring, swaging and brazing; welding-brazing, practice on copper & copper; copper & steel; steel & steel etc. Soldering practice. | Demonstration on single phase motor, identify different types of motors, three phase motors; starting methods of motors; terminal identification of compressor motor, motor stating without relay and capacitor; starting with relay & capacitor. | Identify the electrical components used in non frost refrigerator freezer, check for its proper function, check timer, defrost thermostat, thermal fuse, lamp & fan switch and other components. Connect all components for operation. | Revision on previous work. Practical & Viva Test. Certificate Distribution |

Course No-11

Window and split air-conditioning
4 (Four) Weeks Training Program

| Day / Week | 1 st | 2 nd | 3 rd | 4 th |
|------------|---|---|---|--|
| Sat | Introduction to refrigeration and air conditioning. Definitions and units of heat, temp & pressure. Identification of different refrigeration equipment available in RAC shop. List of special cooling equipment. | Demonstration on compound gauge, high pressure gauge, double gauge manifold; use and care of charging hoses. Demonstration on the use of analog & digital AVO meter, Ampere meter, multi meter. | Start a 3 phase motor with starter and ckt. breaker; Start a 3 phase motor in reverse and forward motion; star and delta connection of 3 phase motor; transformer, check transformer resistance, continuity, ground voltage input and output. | Check refrigerant in the split type air conditioner; charge refrigerant if part charge required. Check leak if empty. Evacuate if full charge required then charge refrigerant. |
| Sun | Identification of common hand tools, measuring tools; special tools & measuring tools and materials used in refrigeration and air conditioning work. | Define of electricity, current, voltage and resistance, units, explanation of ohm's law. Source of electric current; use of voltage stabilizer, volt guard, measuring practice of voltage, current and resistance. | Compressor dome cutting, identification of interior parts, identification of faults, remedies and setting the dome for welding & charging oil; checking pumping & motor condition. | Introduction to different types of air conditioner; mention the advantages and disadvantages of split type over package type. |
| Mon | Practice and use of hand tools and measuring tools used in RAC works, measuring diameter, thickness, length, area and volume in SI and metric system. Demonstration on the operation of refrigeration cycle. | Electrical wiring for series board, use of series board for continuity, resistance and grounding. Identify electrical fitting required in refrigeration and air conditioning work. Specification of electrical fittings, Demonstration on three phase & single phase power supply system. | Identify different types of relay, test/check relay, OLP, capacitor, thermostat, pressure cutout. Demonstration on magnetic contractor. | Test leak in a refrigerator- freezer, repair leak if any; Evacuate and charge appropriate refrigerant. Refrigerant, types of refrigerant, CFC, HCFC, HFC, HC & HC blend. Refrigerant handling. |
| Tue | Introduction to air conditioner piping and fittings; Identify refrigeration fitting, identify with appropriate measurement. | Demonstration on three phase & single phase power supply system. | Making wiring of window on the table; check wiring of a frosted type domestic refrigerator freezer. Starting the refrigerator freezer. Check Ampere & cooling. | Split type air-conditioner repair, maintenance & servicing practice |
| Wed | Introduction to copper tube cutting, bending, flaring, swaging, brazing, welding. Practice on copper tube cutting, bending, flaring, swaging. | Introduction to electrical circuit, series ckt, parallel ckt, making series ckt, and parallel ckt, effect of series ckt and parallel ckt, measuring voltage drop on each resistance. | Operate window cooler for operation, check the effect of voltage, cooling and correct operation; test for thermostat; charge refrigerant. | Window and Split type Ac Fault finding, remedy, repair maintenance & servicing. |
| Thu | Welding practice on copper tube cutting, bending, flaring, swaging and brazing; welding-brazing, practice on copper & copper; copper & steel; steel & steel etc. Soldering practice. | Demonstration on single phase motor, identify different types of motors, three phase motors; starting methods of motors; terminal identification of compressor motor, motor starting without relay and capacitor; starting with relay & capacitor. | Identify the components of split type air condition; study the name plate, check for cooling capacity, FLA, voltage and other information; operate if running; check ampere. | Revision on previous work. Practical & Viva Test. Certificate Distribution |

Course No-12
Water Chiller
2 (Two) Weeks Training Program

| Day / Week | 1st | 2nd |
|-------------------|--|---|
| Sat | Introduction to water chiller. Working principle of refrigeration cycle. Different methods of | Refrigerants, classification, identification of refrigerants used in water chilling. Safe handling of refrigerants. |

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| | refrigeration. | |
| Sun | Explain heat, temp and pressure. Units of heat, temp and pressure; relation between the units. Measurement of temp, pressure, humidity. | Refrigerant recovery. Refrigeration piping, condenser cooling water piping, chilled water piping, fitting; insulation. |
| Mon | Capacity of the refrigeration plant. Refrigeration cycle of water chiller. Identification, classification of different types of water chiller. | parallel operation of compressors and chillers. Pumps, types, parallel operation of pumps, specification of pumps, condenser cooling water header, |
| Tue | Application of water chiller in different field. Compressor, condenser, receiver, expansion device and evaporators used in water chiller. | chilled water header. Cooling towers, demonstration, types of cooling towers. |
| Wed | Classification of the major components of the chiller. Auxiliaries and accessories used in refrigeration cycle; function and location in the cycle. | Leak test evacuating and charging of operation of the plant. |
| Thu | Safety and controllers devices used in the chilling cycle. Demonstration of the common safety devices and controllers. | Observation of operational variables. Log book recording. Review |

Course No-13
Advanced Refrigeration & Air-conditioning
2 (Two) Weeks Training Program

| Day / Week | 1st | 2nd |
|-------------------|---|---|
| Sat | Definition of related terms with refrigeration and Air-conditioning. Laws of refrigeration | Low temperature refrigeration units. Cascade system, multi stage system, multiple temperature system. |

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| | Development and use of refrigeration. Refrigeration cycle components. | Defrosting methods. |
| Sun | Compressor, types, specification, capacity, application of different types of compressors. Checking compressor Motor, causes of failure of compressor & Motor. Maintenance of sealed, semi sealed and open type compressor. | Split type air-conditioner, electrical ckt, installation, evacuating and gas charge. Commercial refrigeration system. Checking and performance test of a refrigerating plant. |
| Mon | Evaporating and condensing pressure effect on compressor capacity. Condenser, classification, Use, care and maintenance. Evaporator, types & use: liquid chilling evaporators. Expansion devices, types and application. | Writing specification of refrigerating equipment. Psychometric chart, psychometric process and psychometric calculations. |
| Tue | Operation of thermostatic expansion valve, capacity of expansion valve. Auxiliaries used in refrigeration cycles. | Sizing of pipes and tubes. Rating & specification of spare parts & materials used in RAC. |
| Wed | Refrigerants, properties of refrigerants types, CFC, HCFC, HFCS, HC and HC blend, ozone friendly refrigerants, refrigeration oils. Effect of refrigerant on the plant capacity. Recovery, recycle, reclaim and retrofit of refrigerants. | Analysis of refrigeration cycle by PH diagram. Calculating the COP, mass flow, capacity of the plant Duct and ducting system. |
| Thu | Leak test, evacuating, charging and purging. Charging methods. Full charge indication/ confirmation. | Air-conditioning, types, operation of central Air-conditioning plant. Controls and safety devices used in RAC. Evaluation and certificate award. |

Course No-14
Computer MS office
8 (Eight) Weeks Training Program

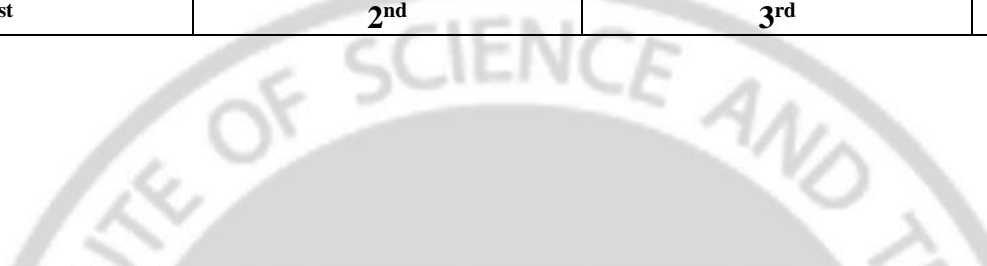
| Day / Week | 1 st | 2 nd | 3 rd | 4 th |
|------------|--|---|---|--|
| Sat | Introduction of a Computer System and history. | Introduction on MS Word, Class – 1 | Security system on MS Word - Class 7(Security Tools) | Introduction on MS Excel - Class 1 |
| Sun | What is Computer Technology? | MS Word - Class 2 (File save and retrieve, print, page setup and save as | MS Word - Class 8 (How to insert picture, chart, comments, foot note, header | MS Excel - Class 2 (File save and retrieve) |

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| | | option) | and footer etc.?) | |
| Mon | Computer Operation (Windows operating system) | MS Word - Class 3 (Search in the document and others) | MS Word - Class 9 (Work with Font, Paragraph, Bullet and numbering and graphics) | MS Excel - Class 3 (Edit the Document and interface) |
| Tue | Introduction on Software | MS Word - Class 4 (Edit the Document) | MS Word - Class 10 (Work with Borders and shading. | MS Excel - Class 4 (Work with simple math-1) |
| Wed | Introduction on Hardware | MS Word-Class 5(Customize the MS Word interface) | Column, Tabs, Auto Format etc. | MS Excel - Class 5 (Work with simple math - 2) |
| Thu | Introduction of Internet Browsing | MS Word-Class 6 (Page Setup, Table) | Project work | Project work |

| Day / Week | 5 th | 6 th | 7 th | 8 th |
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| Sat | Security system on MS Excel - Class 6 (Security Tools) | Introduction on MS Power Point Presentation – Class -1 | MS Power Point Presentation - Class 6 (Presentation - 3) | About Anti Virus Application and Internet security system. |
| Sun | MS Excel - Class 7 (Work with functions) | MS Power Point Presentation - Class 2 (Know the interface and others) | MS Power Point Presentation - Class 7 (Presentation - 4) | Emailing and browsing system |
| Mon | MS Excel - Class 8 (How to format cell?) | MS Power Point Presentation - Class 3 (Preliminary presentation) | Project work | How to download and upload the Data |
| Tue | MS Excel - Class 9 (Work with graph & charts) | MS Power Point Presentation - Class 4 (Presentation - 1) | How to prevent the computer system from Virus, Spyware, Malware and Spam ware? | Practice |
| Wed | MS Excel - Class 10 (Work with graph & charts) | MS Power Point Presentation Class 5 (Presentation - 2) | What is Internet? And How to work with it? | Project work |
| Thu | Project work | Project work | Project work | Review & Certificate Distribution |

Course No-15
Graphic design
4 (Four) Weeks Training Program

| Day / Week | 1 st | 2 nd | 3 rd | 4 th |
|------------|-----------------|-----------------|-----------------|-----------------|
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|-------------------|---|---|--|---|
| <p>Sat</p> | <ul style="list-style-type: none"> • Introducing with Graphic Design • Photoshop interface overview • Screen Mode • Zoom in & Out • Document Setup • Document Pan • Color Apply • Selection Basic | <p>An introduction to Color Correction. Color Adjustment Layers.</p> <ul style="list-style-type: none"> • The Properties Panel. • Hue/Saturation. • Color Balance. • Brightness/Contrast. Fixing contrast with Brightness / • Contrast. Fixing color casting with Color • Balance. Fixing the white and black points with Level's auto option. Adjusting the opacity of a color • adjustment layer. Curves Basics. | <p>Exploring the interface</p> <ul style="list-style-type: none"> * Choosing a workspace * Opening a file Using art boards * Changing your view * Zooming and scrolling * Using tools and panels * Exploring the Control panel * Working with panels and the dock | <ul style="list-style-type: none"> *Getting to know the Layers panel *Using layers to organize an illustration Selecting using the Layers panel *Creating new layers *Showing and hiding layers *Locking and unlocking layers *Rearranging layers *Moving items between layers *Remembering layers when pasting Creating a template layer |
| <p>Sun</p> | <p>Understanding what a layer is</p> <ul style="list-style-type: none"> • Changing the opacity & Fill Opacity of a layer • Changing the stacking order/ Arrange • Turning the visibility of layers on and off • Deleting /Duplicating /Aligning /Group Layer • Layer Mask and Clipping Mask • Layer Lock/Lock Transparent Pixel • Blending Option • Clipping Mask • Filter – Type, Object etc | <p>How to get rid of a pimple and other</p> <ul style="list-style-type: none"> • simple objects with the clone stamp. Healing Brush. • Beauty Retouching. | <ul style="list-style-type: none"> *Using the shape tools *Repositioning and resizing shapes *The Transform panel *Constraining a shape *Entering exact dimensions Selecting artwork *Using the shape and transform tools Introducing layers *Cutting and pasting objects *Repeating transformations | <ul style="list-style-type: none"> • How to create transparent object using Compound path • Links • Arrange • Clipping Mask • Practice with project *Business Card Design |
| <p>Mon</p> | <p>How to add an image to a blank canvas.</p> <ul style="list-style-type: none"> • The transform tool - Ctrl + T - Free Transform • Understanding the importance of modifiers. • Keys in every tool: Shift, Alt, and Control. • Multiple Undo's with The History Panel. • An Introduction to the Rectangular Marquee Tool, fixed size, move when creating selection, make center using Alt Key. • Elliptical Rectangular | <p>How to using Pen tool. Path Selection tool and path palette</p> <ul style="list-style-type: none"> • Path Save/rename/ clipping options • Background and Foreground color fill • Image resizing • Practicing Single layer and MultiLayer • Clipping Path | <ul style="list-style-type: none"> *Exploring the *Appearance panel *Changing colors *Adding effects Using *Live Paint Adding a symbol *Saving swatches *Selecting the same color *Creating a color group *Using the Color panel *Adding Pantone colors | |



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| | <p>Marquee Tool</p> <ul style="list-style-type: none"> • Using Marquee to remove and fill color, Copy Area. • Marquee deselects, border, expand, smooth, contract, Feather. | | | |
| Tue | <p>Using feather.</p> <ul style="list-style-type: none"> • Inverse Selection. • Refining color Selection. • Changing Brush size for quick selection tool. • Select any color from a image (Project). • Rotate (Clockwise, counter clockwise, arbitrary). | <p>Introduction to Re-touch tools and technique Basic Stamping Tool</p> <ul style="list-style-type: none"> • Creating a Good Image * Lips & Hair Color * Design Editing Techniques | <ul style="list-style-type: none"> *Understanding the Pen tool Straight, curved and hinged lines *Tracing images *Creating a tracing template *Working with Image *Trace Using the Line, Pencil and Eraser tools Editing existing paths Adding and removing points Cutting and joining paths *The Shape Builder | <ul style="list-style-type: none"> *Text Based Logo • Symbol Based Logo |
| Wed | <p>Smart Objects vs. Regular Layers.</p> <ul style="list-style-type: none"> • Moving Images from one canvas to another. Shape Tool. • Creating Smart Objects. • Creating Normal Layers. • Convert to Smart Object by right • clicking in layer palette and pressing Convert to Smart Object. Convert to Normal Layer by right • clicking in layer palette and pressing Rasterizing. | <p>Business Card Design * Visiting Card Design</p> | <ul style="list-style-type: none"> *Adding tonal values with gradients *Customizing an existing gradient *Saving a gradient *Using the Gradient panel *Updating a gradient *Creating a pattern *Applying a pattern *Editing a pattern *Locating existing patterns Using the Color Guide | <ul style="list-style-type: none"> *Logo Design Detail *Practise in class |
| Thu | <ul style="list-style-type: none"> • Layer Mask • Make Small and do Mask | <p>Poster Design * Flyer Design</p> | <ul style="list-style-type: none"> *Formatting text *Paragraph formatting *Using paragraph and character styles *Editing styles Putting text on a path *Wrapping text *Putting text in a shape Creating outlines *Checking spelling *Using Find and Replace | <p>Revision & Final Examination</p> |

Course No-16
Website design & outsourcing
8 (Eight) weeks training program



| Day / Week | 1st | 2nd | 3rd | 4th |
|-------------------|---|--|---|--|
| Sat | Creating a HTML page HTML Tags | Table Cell spacing & padding, Changing Table Height & Width of Table Elements Links Anchor Tag | Introduction to CSS External Style Sheet Internal Style Sheet Inline Style Multiple Style Sheet | CSS Syntax CSS Id & Class CSS Selectors CSS1 vs CSS2 vs CSS3 The Cascade & Styling |
| Sun | Paragraph & Text Formatting Lists | HTML Lists & Blocks, HTML Forms & Media, HTML Layout, HTML Form, Form Overview, Marquee Tag. | The letter-spacing Property The word-spacing Property Text Align Property | Line Height Property Background-URL Background-Position |
| Mon | Horizontal Ruling lines HTML Color Background Color | HTML Iframes Create Interactive Button List Background Using Images Make menu Button Using HTML code & Image | Background-Repeat Specificity & Validating your CSS | CSS Box Model 2 Column Layout 3 Column Layout CSS Border, Outline, Margin & Padding |
| Tue | Specifying Font Information Formatting Tags | HTML bdo tag, HTML span tag, HTML5 Basics, HTML5 Intro. | CSS Floating & Positioning CSS Dimension & Display | CSS Align, Pseudo-class, Pseudo-element & Navigation Bar, CSS Image Gallery, Opacity, Sprites & Media Types |
| Wed | HTML Elements HTML Attributes HTML Headings | HTML5 New Elements HTML5 Semantic HTML5 Input Types HTML5 Form Elements | CSS3 Round Corners CSS3 Font-face | CSS3 Box Shadow & Text Shadow CSS3 Transitions, Transform & Gradient |
| Thu | HTML Paragraphs, HTML Hyper links, HTML Table, Table & Data, Alignment Options | HTML5 Form Attributes, HTML5 Media , HTML5 Video, HTML5 Audio | CSS3 Transparency CSS3 Semi-transparency | Introduction to Java Scripting Client and Server side scripting |

| Day / Week | 5st | 6nd | 7rd | 6th |
|-------------------|-----------------------|-----------------------|-----------------------|-----------------------|
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|------------|--|--------------------------------|------------------|----------------------------|
| Sat | JavaScript inserted into HTML pages, can be executed by all modern web browsers. | JavaScript Loop | Layout Planning | Final Build Up |
| Sun | JavaScript is easy to learn. | JavaScript Slide Customization | CSS Optimization | Project Summary |
| Mon | JavaScript Variable | JavaScript Slide Customization | CSS Optimization | Out Sourcing Project Class |
| Tue | Basic Function | PSD to HTML Convert | CSS Optimization | Out Sourcing Project Class |
| Wed | JavaScript Operators | Project Overview | Final Build Up | Out Sourcing Project Class |
| Thu | Form Validation | Project Overview | Final Build Up | Out Sourcing Project Class |

Computer Networking

8 (Eight) Weeks Training Program

| Day / Week | 1 st | 2 nd | 3 rd | 4 th |
|------------|---|---|---|---|
| Sat | <ul style="list-style-type: none"> • Networking Terminology • Network Categories • Standard Network Models • Physical Network Topologies | <ul style="list-style-type: none"> • IPV4 sub netting concept. • Class – “C” sub netting. | <ul style="list-style-type: none"> • Router Interfaces • Viewing, Saving and Erasing Configurations • Routing Basics • The IP Routing Process | <ul style="list-style-type: none"> • Open Shortest Path First (OSPF) Basics • Rules of OSPF |
| Sun | <ul style="list-style-type: none"> • Logical Network Topologies • Data Transmission Methods • Media Access Methods • Signaling Methods | <ul style="list-style-type: none"> • Class – “B” sub netting. • Sub netting practice | <ul style="list-style-type: none"> • Configuring IP Routing in Our Network • Dynamic Routing • Distance-Vector Routing Protocols | <ul style="list-style-type: none"> • Configuring OSPF • Verifying OSPF Configuration • OSPF DR and BDR Elections |
| Mon | <ul style="list-style-type: none"> • Bounded Network Media • Unbounded Network Media • Noise Control • Network Connectivity Devices • Ethernet Networks • Wireless Networks | <ul style="list-style-type: none"> • Class – “A” Sub-netting. • Sub netting practice | <ul style="list-style-type: none"> • Cisco security process • Port security • Password security • Console security • Terminal security | <ul style="list-style-type: none"> • OSPF and Loopback Interfaces • Troubleshooting OSPF • Practice of OSPF |
| Tue | <ul style="list-style-type: none"> • The OSI Model • The TCP/IP Model • The TCP/IP Protocol Suite • IP Addressing | <ul style="list-style-type: none"> • Variable Length Subnet Masks (VLSMs) • Summarization • Troubleshooting IP Addressing | <ul style="list-style-type: none"> • Concept of remote access. • Configure Telnet & SSH • Practice of Telnet & SSH | <ul style="list-style-type: none"> • Troubleshooting OSPF related problem. • OSPF practice lab |
| Wed | <ul style="list-style-type: none"> • Default IP Addressing Schemes • Create Custom IP Addressing Schemes • Implement IPv6 Addresses • Delivery Techniques | <ul style="list-style-type: none"> • Switching • Enable Static Routing • Implement Dynamic IP Routing • Virtual LANs • Plan a SOHO Network | <ul style="list-style-type: none"> • Routing Information Protocol (RIP) • Verifying Your Configurations | <ul style="list-style-type: none"> • EIGRP Features and Operation • Using EIGRP to Support Larger Networks |
| Thu | <ul style="list-style-type: none"> • Assign IP Addresses • Domain Naming Services • TCP/IP Commands • Common TCP/IP Protocols • TCP/IP Interoperability Services | <ul style="list-style-type: none"> • The IOS User Interface • Command-Line Interface (CLI) • Router and Switch Administrative configurations | <ul style="list-style-type: none"> • Troubleshooting RIP related problem. • RIP practice lab | <ul style="list-style-type: none"> • Configuring EIGRP • Load Balancing with EIGRP • Verifying EIGRP |

| Day / Week | 5 st | 6 st | 7 st | 8 st |
|------------|---|---|--|---|
| Sat | <ul style="list-style-type: none"> • Troubleshooting EIGRP related problem. • EIGRP practice lab | <ul style="list-style-type: none"> • VLAN Basics • VLAN Membership • Identifying VLANs | <ul style="list-style-type: none"> • Extended Access Lists • Turning Off and Configuring Network Services • Monitoring Access Lists | <ul style="list-style-type: none"> • Client Redundancy Issues • Introducing First Hop Redundancy Protocol (FHRP) |
| Sun | <ul style="list-style-type: none"> • The Router Boot Sequence • Managing Configuration Register • Backing Up and Restoring the Cisco IOS | <ul style="list-style-type: none"> • VLAN Trunking Protocols (VTP) • Routing between VLANs • Configuring VLANs | <ul style="list-style-type: none"> • Extended Access Lists Configure • Extended Access Lists troubleshooting | <ul style="list-style-type: none"> • Hot Standby Router Protocol (HSRP) • Virtual Router Redundancy Protocol, Syslog • SNMP |
| Mon | <ul style="list-style-type: none"> • Backing Up and Restoring the Cisco Configuration • Using Cisco Discovery Protocol (CDP) • Using Telnet • Resolving Hostnames | <ul style="list-style-type: none"> • VTP & DTP concept • Configuring Catalyst Switches • Configuring VTP | <ul style="list-style-type: none"> • When Do We Use NAT? • Type of Network Address Translation • NAT Names | <ul style="list-style-type: none"> • Introduction to Wide Area Networks • Cable and DSL • Cabling the Serial Wide Area Network |
| Tue | <ul style="list-style-type: none"> • Configuring EIGRP and OSPF Summary Routes • Practice of OSPF & EIGRP | <ul style="list-style-type: none"> • Per vlan Spanning Tree Protocol (PVSTP) • PVSTP configure • Ether Channels | <ul style="list-style-type: none"> • How NAT Works • Testing and Troubleshooting NAT | <ul style="list-style-type: none"> • High-Level Data-Link Control (HDLC) Protocol • Configure HDLC Protocol |
| Wed | <ul style="list-style-type: none"> • Concept of Layer 2 Switching • Switching Services • Spanning Tree Protocol (STP) | <ul style="list-style-type: none"> • Perimeter, Firewall and Internal Routers • Introduction to Access Lists • Standard Access Lists | <ul style="list-style-type: none"> • Why Do We Need IPv6? • The Benefits and Uses of IPv6 • IPv6 Addressing and Expressions | <ul style="list-style-type: none"> • Point-to-Point Protocol (PPP) • Virtual Private Networks • GRE Tunnels |
| Thu | <ul style="list-style-type: none"> • Spanning Tree Protocol (STP) • Configure STP in discontinuous network | <ul style="list-style-type: none"> • Standard Access Lists Configure • Standard Access Lists troubleshooting | <ul style="list-style-type: none"> • How IPv6 Works in an Internetwork • IPv6 Routing Protocols • Migrating to IPv6 | Project Review & Exam |

Computer Hardware Maintenance

8 (Eight) Weeks Training Program

| Day / Week | 1 st | 2 nd | 3 rd | 4 th |
|------------|---|--|---|---|
| Sat | <ul style="list-style-type: none"> • Personal Computer • Components System Unit Components • Storage Devices • Personal Computer Connection Methods | <ul style="list-style-type: none"> • Physical CPU Types • Processor Levels • CPU Sockets and slots • Install and Configure CPUs | <ul style="list-style-type: none"> • Install and Configure Power Supplies • Power Problems • The Power-Good Signal and ATX Power Supplies | <ul style="list-style-type: none"> • Diagnosis and Troubleshooting • Professionalism and Communication • Install and Configure Display Devices |
| Sun | <ul style="list-style-type: none"> • Operating Systems • Windows User • Interface Components • Windows File System Management | <ul style="list-style-type: none"> • Install and Configure CPUs • Common CPUs problem • CPUs over heat troubleshooting. | <ul style="list-style-type: none"> • Power Management of UPS • Troubleshooting & general maintenance of UPS | <ul style="list-style-type: none"> • Computer Assembling • General trick of PC assembling |
| Mon | <ul style="list-style-type: none"> • System board defined • System board evolution • Motherboard removal and Replacement | <ul style="list-style-type: none"> • Identify Hard Disk type • Install and Configure Hard Disk Devices • Diagnostics and Troubleshooting hard disk. | <ul style="list-style-type: none"> • System board defined • System board evolution • Motherboard removal and Replacement • Troubleshooting the motherboard | <ul style="list-style-type: none"> • Basic Input output system concept • General configure of BIOS |
| Tue | <ul style="list-style-type: none"> • Troubleshooting the motherboard • Identify motherboard component • Motherboard installation process | <ul style="list-style-type: none"> • Identify Hard disk boot error. • Diagnostics and troubleshooting common HDD related error. | <ul style="list-style-type: none"> • System board different ports & slots identify • Different type of cable identifies. • General error handling of ports, slots, cables. | <ul style="list-style-type: none"> • Short brif of Operating System • Benefit of using windows and linux OS |

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| Wed | <ul style="list-style-type: none"> • Random Access Memory Defined • Physical Memory Packaging • Types of Memory • Read-only Memory | <ul style="list-style-type: none"> • Tools of the Trade • Electrical Safety • Environmental Safety and Materials • Handling • Perform Preventative Maintenance | <ul style="list-style-type: none"> • Troubleshoot computer Mother Board. • Maintain and Troubleshoot IC section • Troubleshoot common problem of mother board | <ul style="list-style-type: none"> • Prepare windows bootable media • Concept of ISO file & how to use |
| Thu | <ul style="list-style-type: none"> • Managing memory • Common Memory Problems • Identify & troubleshooting common memory related problem. | <ul style="list-style-type: none"> • Power Management • Troubleshooting the Power Supply • SMPS general maintenance | <ul style="list-style-type: none"> • Maintain and Troubleshoot IC section • Troubleshoot common problem of mother board • General Cleaning of motherboard. | <ul style="list-style-type: none"> • Installing process of Windows • Tricks of windows installation • General error handling of installation process. |

| Day / Week | 5th | 6th | 7th | 8th |
|-------------------|--|--|---|--|
| Sat | <ul style="list-style-type: none"> • Windows System Management Tools • Install and Configure Windows • Common tools for windows management. | <ul style="list-style-type: none"> • Hard Drive partition management. • General troubleshooting for partition error. | <ul style="list-style-type: none"> • Assembling of laptop. • Replacing process of laptop accessories | <ul style="list-style-type: none"> • Sharing process with cross connection • General File share & configure security. |
| Sun | <ul style="list-style-type: none"> • Concept of windows drivers • Installing windows drivers • General troubleshooting of windows drivers | <ul style="list-style-type: none"> • Concept of MBR • Concept of GPT • General error handling of MBR & GPT | <ul style="list-style-type: none"> • Concept of Data backup • Different tricks to take backup • Backup tools identification and use. | <ul style="list-style-type: none"> • Security Fundamentals • Security Protection Measures • Data and Physical Security • Wireless Security |
| Mon | <ul style="list-style-type: none"> • Install Microsoft Windows • Upgrade Windows Add Devices to Windows • Optimize Windows | <ul style="list-style-type: none"> • Internet Technologies • Create Network Connections • Install and Configure Web Browsers Maintain | <ul style="list-style-type: none"> • Practical of data backup • Restore process of backup data. | <ul style="list-style-type: none"> • Install and Configure Security Measures • Maintain and Troubleshoot Security Measures |

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|------------|--|---|--|---|
| Tue | <ul style="list-style-type: none"> • Operating System Utilities • Maintain Microsoft Windows • Troubleshoot Microsoft Windows | <ul style="list-style-type: none"> • Troubleshoot Network Connections • Laptop and Portable Computing Device Components. | <ul style="list-style-type: none"> • Data recovery • Data recovery tools • Data recovery process of sudden system failure. | <ul style="list-style-type: none"> • Concept of windows firewall • Configure firewall port • Common problem of firewall block. |
| Wed | <ul style="list-style-type: none"> • Use of different software for windows error handling | <ul style="list-style-type: none"> • Install and Configure Laptops and Portable Computing Devices. • General cleaning and maintenance of laptop | <ul style="list-style-type: none"> • Printer and Scanner Components • Printer and Scanner Processes of installation. • Printer toner refill and general maintenance | <ul style="list-style-type: none"> • Troubleshooting Internet connectection error. • Troubleshooting Browser error. |
| Thu | <ul style="list-style-type: none"> • Recover Microsoft Windows • Network Concepts Network Communications • Network Connectivity | <ul style="list-style-type: none"> • De Assembling of laptop. • Replacing process of laptop accessories | <ul style="list-style-type: none"> • Network printer installation • Printer & Scanner share process. | Exam & review |

Course No-19
Auto CAD Mechanical
8 (Eight) Weeks Training Program

| Day / Week | 1 st | 2 nd | 3 rd | 4 th |
|------------|---|--|--|---|
| Sat | Introduction to Auto CAD, How to Work in a new file, Page Setup with Units and Area. | Familiarize with Chamfer Extend Zoom (All, center, Extents, Previous, scale, window, Real time). | What is Layer : Familiarize with Layer, New Layer, Layer on/off, Layer Freeze, Layer Lock. | Familiarize with: Hatch, Pattern, Hatch Scale, Gradient, Hatch edit. |
| Sun | How to draw Lines in different direction. How to draw Angle, Rectangle and Triangle. | How does the following commands works : Stretch, Scale, Break, Lengthen, Explode. | Familiarize with the tool bars up to 8 consecutive class. | Familiarize with: Point, Osnap (Node) & Some Mechanical drawing. |
| Mon | How to draw Circle, Ellipse, Polygon, polygon inscribed and circumscribed about circle. | Familiarize with By layer (color), By layer (line type), By layer (line weight). | Work with FPS (Foot Pound Second) System. Architectural- (1'-3.5"), | Introduction with Dimension: Horizontal Dimension Vertical Dimension. |
| Tue | How to draw Multi line, Poly line, Sp line, Different types of Line. | Some Mechanical drawing using command & tools up to 9 consecutive class. | Engineering - (1'-3½") Fillet, Fillet with Radius, Fillet without Radius. | Radius Dimension Diameter Dimension Linear Dimension |
| Wed | Dot line, Hidden line, Dash line, Centre line etc. Line type scale factor. | Some Mechanical drawing using the following commands : Array, Array Rectangular, Array Polar, Array Angular. | Some Mechanical drawing Using layers & different types of Hatch, Gradient. | Dimension Decimal Dimension Leader. Dim Scale, Dim Up. |
| Thu | Familiarize with some editing Tools Trim, Offset, Rotate, Mirror. | Erase / Delete, Undo Redone, Move, Copy , Copy (Multiple), Paste etc. | Familiarize with Grid : Grid on/off, Snap on/off, Grid Aspect, Snap Aspect. | Dimension Edit (Home, New, Rotate, Oblique, Dimension Tolerance (On/Off), Dim Tp, Dim Tm, Center Mark, Dimension, Dim center. |

| Day / Week | 5th | 6th | 7th | 8th |
|-------------------|--|---|--|--|
| Sat | Quick Dimension, Aligned Dimension, Ordinate Dimension, | How to add text in drawing D text, M text, Text Edit. | How to show different view of an Isometric Drawing in the same window. | Familiarize with Auto CAD Express Tools. |
| Sun | Baseline Dimension, Continuous Dimension. | Familiarize with : D t (Justify) Text Style. | How to fix up Tool bar in Auto CAD | Uses of Table, How to create Table in Drawing & Drawing with showing information In Table. |
| Mon | How to match properties with other drawing's properties, | Familiarize with : View ports (1, 2, 3 & 4 View ports). | Inquiry –Distance, Area, Region, Object. | Some Mechanical drawing using Express Tools - II. |
| Tue | Blip mode, Redraw, Aligned & Some Mechanical drawing | How to draw Isometric drawing. | How to Install & run Auto CAD. | How to Install Printer & How to take print or plot in Auto CAD - I. |
| Wed | Some Mechanical drawing. | Some Isometric drawing of Mechanical parts. | How to Install Auto CAD Express Tools & run. | How to Install Printer & How to take print or plot in Auto CAD - II. |
| Thu | Some Mechanical drawing. | Some Mechanical drawing using Text & Dimension. | Some Mechanical drawing using Dimension. | Some Mechanical drawing Using Text & Dimension. |

Course No-20
Auto CAD Civil
8 (Eight) Weeks Training Program

| Day / Week | 1 st | 2 nd | 3 rd | 4 th |
|------------|--|--|--|--|
| Sat | Introduction to Auto CAD, How to Work in a new file, Page Setup with Units and Area. | Work with FPS (Foot Pound Second) System. Architectural- (1'-3.5"), Engineering - (1'-3½") Fillet, Fillet with Radius, Fillet without Radius . | Some Civil drawing using the following commands : Array, Array Rectangular, Array Polar, Array Angular. | Introduction with Dimension: Horizontal Dimension Vertical Dimension Linear Dimension. |
| Sun | How to draw Lines in different direction. How to draw Angle, Rectangle and Triangle. | How to draw Multi line, Poly line, Sp line, Different types of Line. | Familiarize with Chamfer Extend Zoom (All, center, Extents, Previous, scale, window, Real time). | Dim Scale, Dim Up. Radius Dimension Diameter Dimension. |
| Mon | Some Civil drawing Using layers & different types of Hatch, Gradient. | Dot line, Hidden line, Dash line, Centre line etc., Line type scale factor. | Familiarize with Grid : Grid on/off, Snap on/off, Grid Aspect, Snap Aspect | Dimension Decimal Dimension Leader Dimension Edit (Home, New, Rotate, Oblique). |
| Tue | Familiarize with By layer (color), By layer (line type), By layer (line weight). | How does the following commands works : Stretch, Scale, Break, Lengthen, Explode. | Erase / Delete, Undo Redone, Move, Copy , Copy (Multiple), Paste etc | Dimension Tolerance (On/Off), Dim Tp, Dim Tm, Center Mark. |
| Wed | Familiarize with : Point, Osnap (Node) & Some Civil drawing. | Familiarize with: Hatch, Pattern, Hatch Scale, Gradient, Hatch edit. | What is Object snap & how Does End point, mid point, Center, Quadrant, Intersection, perpendicular Etc. works. | Quick Dimension, Aligned Dimension, Ordinate Dimension, |
| Thu | How does Lengthen, Block, Insert, Divide etc. Commands works. | Familiarize with some editing Tools Trim, Offset, Rotate, Mirror. | Familiarize with the tool bars up to 8 consecutive class. | Baseline Dimension, Continuous Dimension. Dimension, Dim center. |

| Day / Week | 5th | 6th | 7th | 8th |
|-------------------|--|---|--|--|
| Sat | How to match properties with other drawing's properties, Blip mode, Redraw. | What is Layer: Familiarize with Layer, New Layer, Layer on/off, Layer Freeze, Layer Lock. | Some Civil drawing (Floor Plan etc.) using Dimension. | Column Layout of Bldg. with GB, using grid lines . |
| Sun | Some Civil drawing using command & tools up to 9 consecutive class. | How to add text in drawing D text, M text, Text Edit. | Familiarize with : D t (Justify) Text Style. | Familiarize with : View ports (1, 2, 3 & 4 View ports) |
| Mon | Aligned & Some Civil drawing | Dwg. of Full Column Section with reinforcement. | Some Isometric drawing of Civil Materials (Bricks, Ornamental Bricks etc.) | Some Civil drawing Using Text & Dimension. |
| Tue | How to draw Section of Column, Beam, Roof etc. | How to show different view of an Isometric Drawing in the same indow. | How to fix up Tool bar in Auto CAD. | Some Civil drawing using Text & Dimension. |
| Wed | Familiarize with Auto CAD Express Tools. | How to draw Front Elevation of Bldg. | Inquiry –Distance, Area, Region, Object. | How to Install & run Auto CAD. |
| Thu | Uses of Table, How to create Table in Drawing & Drawing with showing information In Table. | How to draw Sectional Elevation of a Bldg. | How to Install Printer & How to take print or plot in Auto CAD - I. | How to Install Printer & How to take print or plot in Auto CAD - II. |

Course No-21
Technical school management
1 (One) Weeks Training Program

| Day / Week | 1st |
|-------------------|--|
| Sat | Concept of personnel management. Concept of production management. Observation of official works. |
| Sun | Concept of marketing management. Concept of quality control. Observation of practical training. |
| Mon | Concept of maintenance management. Behavior with the staff & customer. Observation of production work. |
| Tue | Performing of financial management. Product costing procedure. Observation of production work. |
| Wed | Performing of product costing. Concept of production drawing. |
| Thu | Observation of general, material and shop floor storing system. |

Course No-22
Workshop Management
1 (One) Weeks Training Program

| Day / Week | 1st |
|-------------------|--|
| Sat | Concept of production Management. Concept of personal management. Observation of practical training. |
| Sun | Concept of maintenance management. Concept of quality control. Observation of production works. |
| Mon | Concept of on the job training. Communication & customer dealings. Observation of on the job training. |
| Tue | Concept of financial management. product costing procedure. Observation of production work. |
| Wed | Concept of SWOT analysis. Concept of marketing management. |
| Thu | Observation of general, Tools, materials, and product storing system. |

Course No-23
Interpreting Technical Drawing
2 (Two) Weeks Training Program

| Day / Week | 1st | 2nd |
|-------------------|---|---|
| Sat | Alphabet of lines & use of lines. Types of drawing. Types and rule of Dimensioning. | Overview of development drawing. Practice of development drawing. |
| Sun | Projection & scale of drawing. Dimensioning practice on flat work pieces. | Overview of assembly drawing. Practice of assembly drawing. |
| Mon | Isometric drawing Practice. Draw the ortho-graphic view from isometric drawing. | Working and assembly detail drawing Practice. Preparing parts list according to the working and assembly drawing. |
| Tue | Overview of sectional drawing with Dimensioning. | Overview of how to interpreting the working drawing. |
| Wed | Symbol of drawing & surface finishing designation. | How to interpreting the sectional drawing. |
| Thu | Tolerance, allowance limits & fits. | How to interpreting the assembly drawing. Revision and Certificate distribution. |

Course No-24
Spoken English
4 (Four) Weeks Training Program

| Day / Week | 1st | 2nd | 3rd | 4th |
|-------------------|--|---|--|--|
| Sat | English Greetings - Good morning - Good evening - Good afternoon - Good night etc. - Uses of greetings. | - Conversation - Command & Request Example stop, please stop. | - Question words - Conversation - Review | - Pass a comment - Response to the comment |
| Sun | Polite phrases & selected words to cover courtesy in English culture & uses of those words. | - Conversation - Finding new words. | - Transformation of sentences. | - Conversation |
| Mon | To express gratefulness. Response to thanks. To draw attention of other people . | - Alternative words. - Similar sentences. | - Helping words (can, could, may, might, must, should, would, etc.) | - Asking time - Address, telephone number. |
| Tue | Excuse me, impolite & Polite | Review Conversation Conception of Tense. | English jokes Conversation Alternative words. | Telephonic conversation Review |
| Wed | Conversation Exclamation: Marvelous, How sad, How terrible, How sweet etc. | Review Conversation Change of Tense Alternatives | Review Conversation Alternatives | Business matters Asking Direction Shopping conversation etc. |
| Thu | Short form of speech: Just coming - O. K. - As you please - Why not? - Doesn't matter etc. | Conversation Positive , Negative & Interrogative. | Self-expression. Question /Answer. Free conversation. | Need based conversation Problem solving Daily matters. |

Course No-25
House Keeping
4 (Four) Weeks Training Program

| Day / Week | 1st | 2nd | 3rd | 4th |
|-------------------|--|--|--|--|
| Sat | Introduction of the house keeping course. | Cleaning, operation and maintenance of washing machine. | Introduction about cultural activities. | Value education |
| Sun | Objective to studies of this course. | Cleaning, Operation and Maintenance of Refrigerators.(Frost, no-frost, Deep Fridge) | Personal health care and personal protective equipment (PPE) | Language and communication skills, Food name, Fruit name. |
| Mon | House keeping work plan. Daily, Weekly, Monthly Work plan | Electric Iron, cleaning, operation, maintenance and Ironing practice. | Bath room cleaning | Number counting day, week & Months name (English and Arabic) |
| Tue | Bedroom Keeping. Bedrooms items, cleaning and interior arrangement. | Cleaning, operation and maintenance of Electric Oven, Micro Oven, Juice maker, Toster Machine, Rich Coker. | Maintenance. | Arabic learning in daily necessary words and simple Arabic spoken practice |
| Wed | Drawing room Keeping, Drawing room items, cleaning and interior arrangement. | Cleaning, operation and maintenance of Gas Oven, Coffee maker, Water heater machine. | Wash room cleaning and maintenance | Migration Information: Passport, Visa, Contract paper. |
| Thu | Dinning room Keeping. Dinning room items, cleaning and interior arrangement. | Dish washer, Deep firer, Grinder Blender, Hairdryer machine and other house hold appliance. | Toilet cleaning and maintenance | Bank Account, Money Exchange, Money sending procedure, Medical Cheek up procedure. |

Course No-26
Tailor made course
AS per requirement

Course No-27
Plumbing (Pipe fitting & sanitary works)
4 (Four) Weeks Training Program

| Day / Week | 1 st | 2 nd | 3 rd | 4 th |
|------------|--|---|---|---|
| Sat | Introduction & identification of plumbing. Tools & fittings. | Applications, uses care, repair & maintenance of Tap & Valve. | Hot & cold water line installation practices. | Dress bath & water heater installation connection. |
| Sun | Identification of plumbing. Tools & fittings. | Repair & maintenance of Tap & Valve. | Hot & cold water line installation practices. | Stack system (soil & waste) Gas Burner maintenance. |
| Mon | Uses of Tools & Fittings measurement practice of (Metric & English.) | Applications, uses care, repair & maintenance of centrifugal pump. | Bath Tap installation. Mixture Tap connection. | Drain system. Septic tank design. Plumbing symbol. Working drawing reading. |
| Tue | Practice of measurement, Filling & Sawing practice. | Glove, Ball, Gate & other's valves identification repair & maintenance. | Sink installation & maintenance. Lead joint practice. | Drain system. Septic tank design. Plumbing symbol. Working drawing reading. |
| Wed | Introduction about die stock. Thread cutting practice. | Cistern identification & maintenance. | Tank hole cutting known about under ground reserve. | Leak test, Blockage Cutter equipment & their use Bracket making. |
| Thu | To perform about pipe specification. Thread cutting practice. | Commode installation with flashing system. | Water main connection with socket & ferrule screw. | PP-R pipe joint practice. |

Course No-28

Fire Fighting (Water pipe line) 2 (Two) Weeks Training Program

| Day / Week | 1 st | 2 nd |
|------------|--|--|
| Sat | <ul style="list-style-type: none"> ▪ Introduction about Fire Fighting Water pipe line. Identification of plumbing & fire fighting tools & fittings. | <ul style="list-style-type: none"> ▪ Application, uses, care, repair & maintenance of valves. |
| Sun | <ul style="list-style-type: none"> ▪ Uses of tools & fittings. | <ul style="list-style-type: none"> ▪ Thread cutting practice. |
| Mon | Measurement practice (British & Metric) | <ul style="list-style-type: none"> ▪ Thread cutting practice. |
| Tue | <ul style="list-style-type: none"> ▪ Identification of different types of pipes and their uses. ▪ To perform about pipe specification. | <ul style="list-style-type: none"> ▪ Pipe joint practice. |
| Wed | <ul style="list-style-type: none"> ▪ Pipe cutting practice for fire fighting. ▪ Introduction and identification about flange, gasket and their uses. | <ul style="list-style-type: none"> ▪ Practice on template. ▪ Pipe bending practice. |
| Thu | <ul style="list-style-type: none"> ▪ Identification and uses of various types of valves. ▪ Identification about rectified valve and flushing valve, specially used for fire fighting line. | <ul style="list-style-type: none"> ▪ Identification of different types of pumps. ▪ Application, uses, care, repair and maintenance of centrifugal pumps. |

Course No-29
Steel fixer/ Rod binding
4 (Four) Weeks Training Program

| Day / Week | 1 st | 2 nd | 3 rd | 4 th |
|------------|---|---|---|---|
| Sat | Introduction about. Steel fixture / Rod Binding work. Tools identification and their function. | Triangle and round Tie making. | Crank rod. Concave convex and Zig - zug Tie making. | Beam binding practice Sunshade with Lintel binding practice. |
| Sun | Tools identification and their application, care and maintenance. | Top stand, round and Square tie making with covering. | Pistol stirrup. "S" type tie. Rectangle lap square tie. | Slab binding practice |
| Mon | Measurement on English and metric system Relation between mm, cm and inch. Measurement practice on different types of object. | Top stand, round and Square tie making with covering. | Fan hook Lap square tie Circle lap try angle tie making. | Column Rod and tie making then binding practice (square & rectangle) by using 20 gauge G.I. wire) |
| Tue | To know about construction rod and their sizes. MS rods straighten practice. To know about construction object. | Pentagon tie Hexagon tie Heptagon tie Octagon tie Making. | Junction tie Star tie – 01 Star tie – 02 making and Rod lapping practice. | Column Rod and tie making then round binding practice by using 20 gauge G.I. wire) |
| Wed | Rod cutting practice according to drawing. Find out cutting length of any tie and stirrups. Hook making. | Trapezium tie. "L" type Tie "T" type tie making. | Binding practice by various position. Base binding practice. | Revision on previous work. |
| Thu | Square tie making Rectangle tie making. | "U" type tie. W type tie Chair tie making. | Column Binding practice. | Practical & Viva Test. Certificate Distribution. |

Course No-30
Shutter Carpenter
4 (Four) Weeks Training Program

| Day / Week | 1 st | 2 nd | 3 rd | 4 th |
|------------|---|---|--|---|
| Sat | Introduction about shuttering carpenter work. Tools identification and their function. | Column kicker making on 90° and 60° Angle cut. Grade beam section making. “L” beam section making. | “T” beam making as per drawing and R.C.C. wall shuttering leveling and braising | Stair removing and re-fixing |
| Sun | Measurement on English and metric system. Relation between mm, cm, and Inch. Measurement practice on different types of object. | “T” beam (plane) and T beam (corridor) section making. | Column shuttering practice . Grade beam shuttering practice. Grade beam one side making on floor by completing supporting and braising. | Slab removing and leveling. |
| Mon | Recognizing of Timber and nail. Hand saw sharpening. And teeth setting by teeth setting pliers. | Base/ Foundation making check by # 90° corner # Properly setting with braising # Use spirit level and plum bob # Column layout practice and setting line nail. | Lintel with sunshade shuttering practice. Drop wall shuttering practice. | Slab removing, reaffixing and level checking. |
| Tue | Wood cutting practice on 90° and 45° Angle by using wooden saw and try square. | Erect layout, column and cheek making by pink # Vertically # 90° corners. # Proper setting and braising # Location and Numbers of plum bobs. | To know about shuttering object To know about SFT, CFT and RFT. | Slab removing, reaffixing and level checking. |
| Wed | Rod cutting practice according to drawing. | Erect layout, column and cheek making by pink # Vertically # 90° corners. # Proper setting and braising # Location and Numbers of plum bobs. | Revision on previous work done. | Revision on previous work. |
| Thu | Find out cutting length of any tie and stirrups. Hook making. | Erect layout column making by nut and bolt. # Vertically 90° corners. # Proper setting # Location and number of plum bobs. | Steel shutter fixing on base and column. | Practical & Viva Test. Certificate Distribution. |

Course No-31
Masonry (Plaster, bricks & hollow blocks seating)
4 (Four) Weeks Training Program

| Day / Week | 1 st | 2 nd | 3 rd | 4 th |
|------------|---|--|--|--|
| Sat | Introduction about masonry works. Tools identification & their function | Brick work with Motor. English Bond (10") L-type & U type. | Wall plaster practice & finishing. | L-type pillar plaster. |
| Sun | Measurement as English & Metric system. | Brick work with Motor. Stretching bond (5") U-type & plus type. | In side corner, Top level plaster practice & finishing. | Introduction about P.C.C & R.C.C work. Slump test. |
| Mon | Introduction about construction material. Brick soling. | Hollow Block work with Motor. L-type, plus type. | Out side corner, top level plaster practice & finishing. | Ceiling level by water level pipe. Sprit level Than plaster. |
| Tue | Measurement practice on different type of objects, leveling practice by water levels sprit level & Plumb bob. | Introduction about plaster. Motor mixing practice & wall plaster practice. | Square pillar plaster & finishing. | Slump test. |
| Wed | Layout practice by 3:4:5 method. Brick cutting practice. Bond practice without Motor. | Wall plaster practice. Introduction about Mixture and Vibrator Machine. | Hexagon pillar plaster | Revision on previous work. |
| Thu | Brick work practice without Motor. English Bond Flemish Bong. Heading Bong. | Introduction about Mixture and Vibrator Machine.. | Introduction about N.C.F. | Practical & Viva Test. Certificate Distribution. |

Course No-32
Masonry (Tiles & marble stone fixing)
4 (Four) Weeks Training Program

| Day / Week | 1 st | 2 nd | 3 rd | 4 th |
|------------|---|---|---|---|
| Sat | Introduction about masonry works, tools identification & their function. | Introduction about wall tiles & floor tiles, wall plaster & tiles fixing (grouting) | Hexagonal pillar plaster & tiles fixing. | Marble stone fixing on wall |
| Sun | Measurement as English & metric system. Relation between mm. cm & inch. Measurement practice different types of object. | Tiles fixing without plaster by spirit level & thread. | "L" types pillar plaster & tiles fixing. | Marble stone fixing on floor & tiles fixing on floor. |
| Mon | Measurement practice different types of object. | Tiles cutting practice (90 ^o & 45 ^o angle) | Round type column plaster & tiles fixing. | Tiles fixing on floor. |
| Tue | Leveling practice by water level, spirit level & Plumb bob. Layout practice by 3:4:5 method. | Tiles fixing on wall (Inside corner) | Introduction about marble stone, granite. Marble stone fixing on wall. | Tiles fixing, together on wall & floor. |
| Wed | Introduction about plaster & plaster practice. | Tiles fixing on wall (Outside corner) | Marble stone cutting practice & design. | Revision on previous work. |
| Thu | Wall plaster practice & finishing. | Square pillar plaster & tiles fixing. | Marble stone fixing on floor | Practical & Viva Test. Certificate Distribution. |

Course No-33
Masonry (Mosaic, tiles, marble stone & ceramics brick fixing)
8 (Eight) Weeks Training Program

| Day / Week | 1 st | 2 nd | 3 rd | 4 th |
|------------|---|--|---|--|
| Sat | Introduction about masonry works, tools, identification and their function. | Brick work with Mortar. English bond (10"). "L" and "U" type wall. | Wall plastering practice and finishing. | Tiles fixing without plaster by using try-square, spirit level. (Outside corner) |
| Sun | Measurement as English & metric system. | Brick work with Mortar. Stretching bond (5"). "U" type, plus type wall and hollow block. | Wall plastering practice by using ruler, plumb bob, try-square and spirit level. | Introduction about marble stone, granite and fixing in flat wall. |
| Mon | Brick soling practice. | Introduction about hollow block, layer practice with Mortar. | Introduction about tiles. Wall plastering and tiles fixing with grouting. | Marble stone fixing on wall. (outside corner). |
| Tue | Measurement practice on different types of objects. Leveling practice by water level, sprit level & plum bob. | Introduction about plaster. Mortar applying in right side. | Tiles fixing without plaster by using spirit level, thread in flat wall. | Marble stone fixing on wall. (Inside & outside corner). |
| Wed | Layout practice by 3:4:5 methods. Brick bond practice without Mortar. | Motor applying in left side. | Tiles fixing without plaster by using try-square (Inside corner) | Marble stone fixing on floor by using Mortar. |
| Thu | Brick work without Mortar. English bond. Flemish bond. Heading bond. | Motor applying in right and left side. | Tiles fixing without plaster by using try-square, spirit level. (Inside & outside corner) | Floor tiles fixing by using Mortar. |
| Day / Week | 5 th | 6 th | 7 th | 8 th |
| Sat | Tiles cutting practice (90° and 45° angle). | Marble cutting practice and design. | Introduction about fare bricks and fixing. | Use of mixture machine and vibrator machine. |
| Sun | Square pillar plaster practice and tiles fixing. | Introduction about mosaic floor. Glass & Pattern | Various types of fare bricks and fixing. | Tiles fixing on wall and floor together. |

| | | | | |
|------------|---|---|---|--|
| | | stone setting. | | |
| Mon | "L" type pillar plaster practice and tiles fixing. | Introduction about mosaic mixing and floor casting. | Brick pointing practice and plaster pointing practice. | Mosaic floor cutting by hand and machine. |
| Tue | Hexagonal pillar plaster practice and tiles fixing. | Mosaic practice on wall. | Ceiling level by water & spirit level and plaster practice. | N. C. F practice. |
| Wed | Round column plaster practice. | Introduction about R.C.C and P.C.C work. | Ceiling plastering practice. | Revision on previous work. |
| Ths | Round column plaster practice and tiles fixing. | Slump test. | Ceiling plastering practice and finishing. | Practical & Viva Test. Certificate Distribution. |

Course No-34
Painting (Building & spray)
4 (Four) Weeks Training Program

| Day / Week | 1 st | 2 nd | 3 rd | 4 th |
|------------|---|---|---|---|
| Sat | Introduction about building painting course. Tools identification and their application. Safety precaution of painting works. | Old wall painting preparation and application of primer coat. | Introduction about spray painting machine and equipments. Such as compressor machine and spray gun etc. | Preparation of cleaning practice Door and window of building. Primer coat and putty practice. |
| Sun | Preparation of sheet metal surface for hand painting practice by painting brush. | After cleaning and application of primer coat old wall Putting practice. | Spray painting practice on sheet metal surface. | Enamel putty finishing and application of Enamel paint. |
| Mon | Preparation of outside wall for application of durecem painting and practice of durecem painting. | After cleaning and application of primer coat new wall putting practice. | Spray painting practice on new and old wall. | Cleaning system of chemical and description of powder paint Staving paint and Epoxy paint. |
| Tue | Durecem painting practice and purring by water new and old wall. | Old wall painting practice. | Spray painting practice on sheet metal production work. | Length area and volume calculation paint estimating of wall. |
| Wed | Durecem painting practice | New wall painting practice. | Preparation of inside wall for application of distemper painting and practice of distemper painting. | Revision of painting work. |
| Thu | Inside New and Old wall putty making and practice. | Check putting preparation and final painting and finishing of the old and new wall. | Practice of distemper painting. | Test and certificate distribution |

Course No-35
Painting (Metal spray)
4 (Four) Weeks Training Program

| Day / Week | 1 st | 2 nd | 3 rd | 4 th |
|------------|--|--|---|--|
| Sat | Introduction about metal spray painting course. Identification of tools and equipments. Safety precaution of painting works. | Spray painting practice on sheet metal / wood surface. | Paint removing. Manual and chemical. | Checking putty application on job |
| Sun | Preparation of sheet metal surface for hand painting practice by painting brush. | Spray painting practice on various types of production like sheet metal and wood. | Rust removing / Cleaning Application primer coat. | Preparation for painting. Enamel and hammer paint. |
| Mon | Enamel putty making and practice on board putty removing procedure by flat scraper. | Enamel putty practice on final production job like sheet metal and wood. | Enamel putty making application 1 st coat. | Surface preparation of wood furniture. Under coat and putting. |
| Tue | Introduction about spray painting and air compressor machine. Setting and uses of spray gun. Pressure checking and reading. | Enamel putty practice on final production job. | Enamel putty application 2 nd coat by Crouse wise. | Putty finishing. Application enamel and hammer paint. |
| Wed | Preparation of sheet metal surface for spray painting practice. | Measurement practice British and metric length area and volume calculation paint estimating. | Putty finish. Enamel paint mixing and application 1 st coat. | Final finishing paint surface |
| Thu | Sheet metal surface spray painting practice. | Metal surface spray painting practice. | Putty finish. Enamel paint mixing and application 2 nd coat. | Test, Revision & certificate distribution |



দিশা | DISA পরিচালিত
একটি সামাজিক উদ্যোগ

দিশা ইনস্টিটিউট অব সাইন্স এন্ড টেকনোলজি (ডিআইএসটি)

প্লট নং-৪৫, রোড নং-০৭, ব্লক-এ, মিরপুর, সেকশন-১২, পল্লবী, ঢাকা-১২১৬

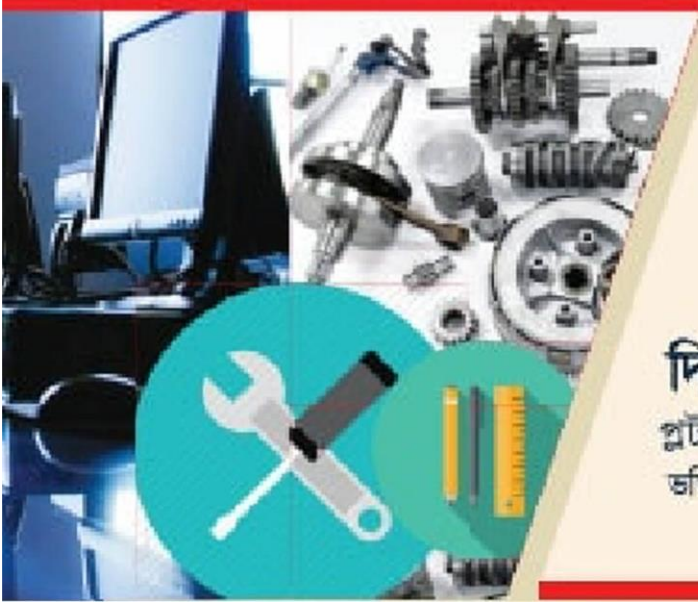
ভর্তি সংক্রান্ত বিষয় : ০১৭০৮৪৪৯৯৫০, অধ্যক্ষ : ০১৭০৮৪৪৯৯৬৭, উপদেষ্টা : ০১৭০৯৩৮৯০৯৫

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দিশা ইনস্টিটিউট অব সাইন্স এন্ড টেকনোলজি (ডিআইএসটি)

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