

Syllabus of Paper-I and Paper-II for all Technician (1) posts

PAPER-I

Mental Ability Test:

It would include questions of both verbal and non-verbal type. The test will include questions on analogies, similarities and differences, space visualization, problem solving, analysis, judgement, decision making, visual memory, discriminating observation, relationship concepts, arithmetical reasoning, verbal and figure classification, arithmetical number series, non-verbal series etc. The test will also include questions designed to test the candidate's abilities to deal with abstract ideas and symbols and their relationship, arithmetical computation and other analytical functions.

PAPER-II

A) General Awareness:

Questions will be designed to test the ability of the candidate's general awareness of the environment around him and its application to society. Questions will also be designed to test knowledge of current events and of such matters of everyday observation and experience in their scientific aspects as may be expected of an educated person. The test will also include questions relating to India and its Neighboring countries especially pertaining to Sports, History, Culture, Geography, Economic scene, General Polity including Indian Constitution, and Scientific Research etc. These questions will be such that they do not require a special study of any discipline.

B) English Language:

In addition to the testing of candidates' understanding of the English Language, vocabulary, grammar, sentence structure, synonyms, antonyms and its correct usage, etc.

Mode of Examination	OMR Based or Computer Based Objective Type Multiple Choice Examination
Medium of Questions	The questions will be set both in English and Hindi except the questions on the English Language
Standard of Exam	SSC + ITI / XII th Standard
Total No. of Questions	150
Total Time Allotted	2 hours 30 minutes

Paper-I (Time Allotted - 1 hour)

Subject	No. of Questions	Maximum Marks	Negative Marks
Mental Ability Test*	50	100 (two marks for every correct answer)	There will be no negative marks in this paper

**Mental Ability Test will be so devised so also include General Intelligence, Quantitative Aptitude, Reasoning, Problem Solving, Situational Judgement, etc.*

Paper- II (Time Allotted - 30 minutes)

Subject	No. of Questions	Maximum Marks	Negative Marks
General Awareness	25	75 (three marks for every correct answer)	One negative mark for every wrong answer
English Language	25	75 (three marks for every correct answer)	One negative mark for every wrong answer

Paper-III (Time Allotted - 1 hour)

Subject	No. of Questions	Maximum Marks	Negative Marks
Concerned Subject	50	150 (three marks for every correct answer)	One negative mark for every wrong answer

Advt. No. 01R/2023
Post Code T-01

Advt. No. 02R/2024
Post Code T-19

[Technician (1)]

Area: Instrument Mechanic

Syllabus for Paper III

- **Workshop Safety & Practices:** PPE, electrical safety, handling instruments.
- **Engineering Drawing & Basics:** Reading circuit diagrams, symbols, schematics.
- **Electrical & Electronics Fundamentals:** Ohm's law, resistors, capacitors, diodes, transistors, conductor, semiconductor & insulators, Resistor, Resistivity and colour code, Types of resistors used in instrumentation, Series & parallel circuits, A.C & DC electricity.
- **Measuring Instruments:** Multimeter, ammeter, voltmeter, wattmeter.
- **Basic Calibration:** Principles of calibration, accuracy, precision.
- **Transducers & Sensors:** Temperature, pressure, flow, level sensors.
- **Signal Conditioning:** Amplifiers, filters, converters.
- **Industrial Instrumentation:** Pressure gauges, thermocouples, RTDs, flow meters.
- **Control Systems Basics:** Open loop, closed loop, PID controllers.
- **Calibration & Testing:** Standard procedures, documentation.
- **Troubleshooting:** Fault diagnosis in instruments and circuits.
- **Advanced Electronics:** Op- amps, digital electronics, microcontrollers.
- **Process Control Instruments:** DCS, PLC basics, SCADA introduction.
- **Industrial Automation:** Sensors integration, relay logic, ladder diagrams.
- **Communication Systems:** Analog/digital signals, data acquisition.
- **Analytical Instruments:** pH meter, spectrophotometer, chromatography basics, calibration of instruments.
- **Biomedical Instruments:** ECG, BP monitor, medical sensors (introductory).
- **Maintenance & Repair:** Preventive maintenance, fault rectification.
- **Quality Assurance:** ISO standards, documentation, traceability.
- Soldering and desoldering.
- UPS and SMPS,
- **Communication Skills:** Oral and written communication, Discipline, ethics, customer service.
- **IT Literacy:** Basics of computers, IT/Software applications (MS Office, email etc).

Advt. No. 01R/2023
Post Codes T-02, TBL-02A and
TBL-02B

Advt. No. 02R/2024
Post Codes T-20, TBL-02A and
TBL-02B

[Tecnician (1)]
Area: Horticulture

Syllabus for Paper III

- Fundamentals of Horticulture: Scope, importance, classification of horticultural crops.
- Nursery Management: Propagation methods, seed treatment, grafting, budding, nursery layout.
- Fruit Science: Cultivation practices of Apple, Walnut, Mango, Banana, citrus, guava, etc.
- Vegetable Science: Production techniques of tomato, brinjal, okra, leafy vegetables.
- Floriculture: Cultivation of rose, Tulip, marigold, gladiolus, chrysanthemum, orchids.
- Medicinal & Aromatic Plants: Cultivation and processing of Medicinal and Aromatic plants.
- Soil & Fertility Management: Soil types, manures, fertilizers, nutrient management.
- Plant Protection: Identification and control of pests, diseases, weeds.
- Post-Harvest Technology: Harvesting, grading, storage, packaging, value addition.
- Landscaping & Gardening: Principles of landscape design, lawn establishment, ornamental plants.
- Importance of different elements of weather and climate in agriculture, Agro-climatic regions with their special character
- Soil texture (definition, particle size of soil ingredients i.e. sand, silt, clay) classification and importance. Porosity, bulk density & particle density. Structure (definition, classification, importance), water holding capacity, Evaluation of soil Physical & Chemical parameters, Soil classes on the basis of agro climatic zones, Problem soils and amelioration
- Green manure, Bio fertilizer, Chemical fertilizers.
- Nursery and seed production, Pot plants, Lawn grasses, Landscape plants, Floriculture, Bonsai, Vertical and Rooftop Gardening, Poly house, Shade Net House, Irrigation techniques.
- Communication Skills: Oral and written communication, Discipline, ethics, customer service.
- IT Literacy: Basics of computers, IT/Software applications (MS Office, email etc).

Advt. No. 01R/2023
Post Codes T-03A and T-03B

Advt. No. 02R/2024
Post Codes T-21A and T-21B

[Tecnician (1)]

Area: IT & System Mechanic

Syllabus for Paper III

- **Computer Fundamentals:** Hardware components, input/output devices, storage devices.
- **Operating Systems Basics:** DOS, Windows, Linux and installation of OS, file management.
- **Electrical & Electronics Basics:** Ohm's law, resistors, capacitors, transistors, diodes.
- **Assembling & Disassembling PCs:** Motherboard, CPU, RAM, HDD/SSD installation.
- **Peripheral Devices:** Printers, scanners, monitors, troubleshooting.
- **Networking Fundamentals:** LAN, WAN, MAN, topologies, IP addressing.
- **Cabling & Connectivity:** Crimping, punching, fiber optics basics.
- **Network Devices:** Switches, routers, hubs, access points.
- **Protocols & Services:** TCP/IP, DNS, DHCP, FTP, HTTP.
- **Basic Server Management:** User accounts, permissions, backup.
- **Troubleshooting & Maintenance:** Hardware diagnostics, software issues, virus removal.
- **Advanced Networking:** VLANs, subnetting, routing protocols.
- **Wireless Networking:** Wi-Fi setup, security, troubleshooting.
- **System Administration:** Installing servers, managing domains, Active Directory.
- **Data Security:** Firewalls, antivirus, encryption basics.
- **Virtualization & Cloud Basics:** Virtual machines, cloud storage, SaaS concepts.
- **Advanced Hardware Maintenance:** Chip-level troubleshooting, BIOS/UEFI settings.
- **Storage Solutions:** RAID, NAS, SAN basics.
- **Backup & Disaster Recovery:** Strategies, tools, testing.
- **Network Security:** Intrusion detection, VPN, secure configurations.
- **Communication Skills:** Oral and written communication, Discipline, ethics, customer service.
- **IT Literacy:** Knowledge AI/ML and other emerging technologies.

Advt. No. 01R/2023
Post Codes T-04A and T-04B

Advt. No. 02R/2024
Post Codes T-22A and T-22B

Technician (1)

Area: Carpenter

Syllabus for Paper III

- Introduction of timber, growth of timber trees, cross-section of exogenous tree trunk, types of tree, different part of a tree, Soft & hard wood, their differences
- Defects in timber, diseases of timber, knots, shakes, grains etc.
- Carpentry hand tools, classification and uses of marking, work holding devices, Measuring & testing tools, Type of bench vices and their uses, marking gauges, instruments necessary for checking flatness and twistness of surface, Striking tools.
- Different saw and their uses, power circular saw, special saws, compass saw, coping saw, bow saw, fret saw. Saw sharpening and sharpening tools.
- Boring tools - Types, Parts, functions, size and application. Portable electrical drill machine, Drill bits, types, sizes etc., Hand augers description, sizes of augers, application of hand augers
- Type of planing machine and their uses in wood work - Description, function and its size, setting, knowledge of sharpening and uses etc., Sharpening and grinding angle of cutter.
- Different type chisels - Definition, identification, their uses, Files - Types, uses, Care & maintenance of files
- Seasoning and preservation of timber - advantage and disadvantages. Moisture content in timber and its effect on timber. Characteristics of wood, physical and mechanical properties of wood, Quality of good timber.
- Classification of wooden joints and their Uses, Framing joint, angle joint and lengthening joint, housing joint, dovetail joint, Broadening joint, Method of Dowel application
- Glues - Types of glue and their uses, Advantage of adhesives use and their types,
- Types of plywood, Advantage of plywood, Application of plywood, block board, laminated board, hard board, insulation board, mica etc.
- Parts of portable disc sander, Application of portable disc sander, Care & maintenance of sander
- Calculation of timber required for making various parts like stool, bill of materials
- Conversion and types, Parallel sawing, Radial sawing, Quarter sawing, Tangential sawing
- Nails and screws types, Uses etc. Nut, bolts and washer - types and Uses · Lock hinges hasp and staple. Other fittings – types, size
- Paints, ingredients of paints, Method of preparation of surface for staining. Necessary tools and equipment required for staining. Uses of different grade sand paper.
- Description & method of French polish, wax polish
- Types and parts of band saw machine, circular saw machine
- Wood turning lathe – Description, Types, Sizes, Parts, Operation
- Knowledge of different aluminum section, channels required for manufacturing the windows, doors, etc., Anodising of the aluminum section etc.
- Removing old painting / polish by chemicals, new painting and priming on wood
- Communication Skills: Oral and written communication, Discipline, ethics, customer service.
- IT Literacy: Basics of computers, IT/Software applications (MS Office, email etc).

Advt. No. 01R/2023
Post Codes T-05A, T-05B and
TBL-03

Advt. No. 02R/2024
Post Codes T-23A, T-23B and
TBL-03

[Technician (1)]
Area: Electrician

Syllabus for Paper III

- **Workshop Safety & Practices:** PPE, electrical hazards, first aid.
- **Engineering Drawing & Basics:** Electrical symbols, wiring diagrams.
- **Fundamentals of Electricity:** Ohm's law, series/parallel circuits, Kirchhoff's laws.
- **Tools & Instruments:** Multimeter, megger, clamp meter, test lamp.
- **Basic Wiring:** House wiring, switches, sockets, lamp circuits.
- **DC Machines:** Construction, working, testing of generators & motors.
- **AC Fundamentals:** Single-phase & three-phase systems, star/delta connections.
- **Transformers:** Construction, testing, maintenance.
- **Earthing & Safety:** Types of earthing, shock prevention, safety codes.
- **Domestic & Industrial Wiring:** Conduit wiring, distribution boards, protective devices.
- **Troubleshooting:** Fault diagnosis in wiring and machines.
- **AC Machines:** Induction motors, synchronous motors, alternators.
- **Control Circuits:** Starters, contactors, relays, overload protection.
- **Illumination Engineering:** Lighting systems, lux measurement, energy efficiency.
- **Power Electronics Basics:** Rectifiers, inverters, UPS systems.
- Installation of motor control circuits, wiring of small workshops.
- **Generation & Transmission Basics:** Power plants, transmission lines, substations.
- **Distribution Systems:** LT/HT lines, transformers, switchgear.
- **Renewable Energy Systems:** Solar PV installation, wind energy basics.
- **Testing & Maintenance:** Preventive maintenance, insulation testing.
- Electrical safety, precaution, care & maintenance
- **Communication Skills:** Oral and written communication, Discipline, ethics, customer service.
- **IT Literacy:** Basics of computers, IT/Software applications (MS Office, email etc).

Advt. No. 01R/2023
Post Code T-06

Advt. No. 02R/2024
Post Code T-24

[Technician (1)]
Area: AC & Refrigeration

Syllabus for Paper III

- **Workshop Safety & Practices:** PPE, fire safety, refrigerant handling.
- **Basic Engineering Drawing:** Symbols, diagrams of refrigeration cycles.
- **Fundamentals of Refrigeration:** Vapour compression cycle, components (compressor, condenser, evaporator, expansion valve).
- **Tools & Equipment:** Use of gauges, vacuum pumps, leak detectors.
- **Basic Electrical Knowledge:** Motors, wiring, starters, relays.
- **Domestic Refrigeration Systems:** Refrigerator, deep freezer, water cooler.
- **Air Conditioning Basics:** Window AC, split AC, package units.
- **Installation & Servicing:** Mounting, piping, wiring, charging refrigerant.
- **Troubleshooting:** Fault diagnosis, repair of compressors, condensers, evaporators.
- **Refrigerants:** Types (CFC, HCFC, HFC, natural refrigerants), properties, environmental impact.
- **Energy Efficiency:** Star ratings, insulation, load calculation.
- **Commercial Refrigeration Systems:** Cold storage, ice plants, display cabinets.
- **Centralized AC Systems:** Ductable AC, chillers, AHU, cooling towers.
- **Advanced Electrical Systems:** Control circuits, thermostats, sensors, PLC basics.
- **Piping & Ducting:** Copper tube bending, brazing, duct fabrication.
- **Testing & Commissioning:** Performance testing, balancing, efficiency checks.
- Installation of a split AC or cold storage unit.
- **Industrial Refrigeration:** Ammonia systems, large cold chains.
- **HVAC Systems:** Heating, ventilation, air conditioning design basics.
- **Automation & Smart Controls:** IoT-enabled AC systems, BMS basics.
- **Environmental & Safety Norms:** Ozone depletion, refrigerant recovery, recycling.
- **Communication Skills:** Oral and written communication, Discipline, ethics, customer service.
- **IT Literacy:** Basics of computers, IT/Software applications (MS Office, email etc).

Advt. No. 01R/2023
Post Code T-07

Advt. No. 02R/2024
Post Code T-25

Technician (1)
Area: Welding

Syllabus for Paper III

- **Basic Engineering Drawing:** Reading welding symbols, simple sketches.
- **Introduction to Welding:** Principles, types (gas, arc, MIG, TIG).
- **Gas Welding & Cutting:** Oxy-acetylene welding, flame types, gas cutting.
- **Arc Welding Basics:** SMAW (Shielded Metal Arc Welding), electrodes, polarity, Multi-pass welding, pipe welding, repair techniques.
- **Weld Joints & Positions:** Butt, lap, corner, T-joint; flat, horizontal, vertical, overhead.
- **Metallurgy Basics:** Properties of metals, heat effects, distortion control.
- **MIG/MAG Welding:** Gas metal arc welding, shielding gases, applications.
- **TIG Welding:** Gas tungsten arc welding, electrode types, stainless steel/aluminum welding.
- **Welding Defects & Inspection:** Cracks, porosity, undercut, NDT basics.
- **Fabrication Techniques:** Layout marking, cutting, fitting, assembly.
- **Welding Automation Basics:** Introduction to robotic welding, CNC cutting.
- **Communication Skills:** Oral and written communication, Discipline, ethics, customer service.
- **IT Literacy:** Basics of computers, IT/Software applications (MS Office, email etc).

Advt. No. 01R/2023
Post Code T-08

Advt. No. 02R/2024
Post Code T-26

[Technician (1)]

Area: Digital Photography

Syllabus for Paper III

General Science & Basic Knowledge :

- History of photography, Types of cameras, Types of photography , Resolution, Focal length , Basic Physics (Light, Optics, Lenses, Reflection, Refraction) and Principles of Photography; Chemistry of Photographic Materials (Basics of film & digital media); General knowledge on digital sensors and image formation

Fundamentals of Photography Camera Operations & Exposure Control:

- Basics of lighting in photography (natural vs. artificial light), Settings: ISO, shutter speed, aperture, and white balance, Depth of field and exposure control, Composition techniques and framing
- **Camera types & parts:** DSLR, mirrorless, compact; lenses, sensors, viewfinders.
- **Metering modes:** Spot, center-weighted, evaluative.
- **Focus techniques:** Manual vs auto focus, depth of field control.
- Handling, cleaning, mounting lenses, tripod use.

Digital Imaging & File Formats

- **Image resolution:** Pixels, DPI, megapixels, print vs screen resolution.
- **File formats:** JPEG, RAW, TIFF, PNG — advantages & limitations.
- **Color models:** RGB (digital), CMYK (print), grayscale.
- **Compression & storage:** Lossy vs lossless, memory cards, cloud storage.
- **Metadata:** EXIF data, geotagging, copyright info.

Lighting & Composition Techniques:

- **Natural vs artificial light:** Golden hour, studio lights, flash.
- **Lighting setups:** Three-point lighting, softboxes, reflectors, diffusers.
- **Composition rules:** Rule of thirds, leading lines, framing, symmetry.
- **Perspective & angles:** High angle, low angle, eye level, macro.
- **Creative techniques:** Long exposure, light painting, silhouette photography.

Image Editing Software (Photoshop, Lightroom):

- **Photoshop basics:** Layers, masks, selection tools, retouching.
- **Color correction:** Curves, levels, hue/saturation, white balance.
- **Lightroom workflow:** Import, cataloging, non-destructive editing.
- **Advanced techniques:** HDR blending, panorama stitching, frequency separation.
- **Output preparation:** Export settings for web, print, social media.
- Color correction and color spaces (RGB, CMYK),
- Image retouching and restoration,
- File storage,
- Backup,
- Archiving techniques,

Videography Basics:

- **Camera handling for video:** Stabilization, panning, tilting, handheld vs tripod.
- **Frame rates & resolution:** 24fps, 30fps, 60fps; HD, 4K.

- **Audio basics:** Microphones, syncing, ambient sound.
- **Storytelling:** Shot types (wide, medium, close-up), continuity, transitions.
- **Editing workflow:** Timeline, cuts, effects, rendering.

Printing & Output Methods:

- **Photo printing techniques:** Inkjet, laser, dye-sublimation.
- **Color calibration:** Monitor vs printer consistency.
- **Paper types:** Glossy, matte, textured, archival.
- **Digital albums:** Layout design, binding, online publishing.
- Preparing files for print, web, exhibitions.

General Knowledge & Safety :

- Safe handling of photographic equipment and basic troubleshooting of cameras and lighting equipment; Understanding of copyrights and ethical aspects in photography; Awareness of photography applications in scientific research;

Communication Skills: Oral and written communication, Discipline, ethics, customer service.

IT Literacy: Basics of computers, IT/Software applications (MS Office, email etc).

Advt. No. 01R/2023
Post Codes T-09A and T-09B

Advt. No. 02R/2024
Post Codes T-27A and T-27B

[Technician (1)]

Area: Housekeeping/Health Safety & Environment

Syllabus for Paper III

- **Housekeeping Fundamentals:** Different types of Housekeeping establishments, Duties and responsibilities of Housekeeping service personals, Cleaning methods, frequency and schedule, Agents and equipment, tools, equipment, chemicals.
- **Hygiene:** Hygiene and its importance, Factors influencing health and healthy leaving, Personal hygiene of food handlers.
- **Surface Care:** Floors, carpets, upholstery, glass, wood, metal, steps of dusting, mopping, sweeping, vacuum cleaning etc.,. Basic knowledge of proper ventilation and lighting
- **Waste Management:** Segregation, disposal, recycling basics.
- **Laundry Operations:** Knowledge of Laundry & Linen Management. Washing, ironing, stain removal, machine handling. Introduction to pest control & pest controlling practices
- **Guest Room & Office Care:** Bed making, furniture arrangement, sanitation.
- **Health & Safety Basics:** PPE, fire safety, first aid, emergency response.
- **Environmental Practices:** Pollution control, energy conservation, water management.
- **Occupational Safety:** Hazard identification, risk assessment, accident prevention.
- **Industrial Hygiene:** Ventilation, lighting, ergonomics, sanitation.
- **Documentation & Reporting:** Safety records, housekeeping logs, compliance.
- Introduction and classification of wastes: Collection and Disposal. Basic knowledge of gardening & horticulture.
- Basic knowledge of Principle of energy conservation.
- Principle of working of different type of fire extinguisher and different firefighting equipment.
- **Communication Skills:** Oral and written communication, Discipline, ethics, customer service.
- **IT Literacy:** Basics of computers, IT/Software applications (MS Office, email etc).

Advt. No. 01R/2023
Post Code T-10

Advt. No. 02R/2024
Post Code T-28

Technician (1)
Area: Lab Assistant

Syllabus for Paper III

- Basic Chemistry Concepts: Atomic structure, bonding, stoichiometry.
- Laboratory Safety & Practices: Handling chemicals, PPE, fire safety, first aid.
- Analytical Chemistry: Volumetric analysis, gravimetric analysis, titrations.
- Instrumental Methods: pH meter, colorimeter, spectrophotometer, chromatography basics.
- Inorganic Chemistry: Qualitative analysis of salts, preparation of solutions.
- Organic Chemistry: Identification of functional groups, simple synthesis, distillation.
- Physical Chemistry: Thermodynamics basics, solubility, colligative properties.
- Industrial Chemistry Basics: Water treatment, fertilizers, polymers.
- Record Keeping & Documentation: Lab notebooks, data entry, report preparation.
- Fundamentals of Biology: Cell structure, biomolecules, genetics basics.
- Microbiology: Sterilization, culture media preparation, staining techniques.
- Biochemistry: Enzyme activity, carbohydrate/protein/lipid tests.
- Human Physiology Basics: Blood tests, urine analysis, vital signs.
- Botany & Zoology Practical Skills: Microscopy, specimen preparation, slide mounting.
- Molecular Biology Basics: DNA/RNA extraction, electrophoresis (introductory).
- Environmental Biology: Water/soil testing, pollution indicators.
- Biomedical Waste Management: Segregation, disposal, infection control.
- Documentation & Ethics: Patient confidentiality, lab records, GLP (Good Lab Practices).
- Mathematics and Basic Science: mathematical principles and basic scientific concepts.
- Communication Skills: Oral and written communication, Discipline, ethics, customer service.
- IT Literacy: Basics of computers, IT/Software applications (MS Office, email etc).

Advt. No. 01R/2023
Post Code T-11

Advt. No. 02R/2024
Post Code T-29

Technician (1)
Area: Pump Operator

Syllabus for Paper III

- Pump types & applications (centrifugal, reciprocating, submersible)
- Maintenance & troubleshooting techniques
- Basic hydraulics & fluid mechanics
- Motor operation & electrical safety
- Pipe fitting, valves, and installation practices
- Workshop calculations & science (applied physics, mathematics)
- Basic Workshop calculation skills
- Drawing Skills: Lines, dimensions, scales.
- Orthographic Projection: 2D and 3D views of plumbing layouts.
- Blueprint Reading: Construction drawings for water supply and drainage systems.
- Communication Skills: Oral and written communication, Discipline, ethics, customer service.
- IT Literacy: Basics of computers, IT/Software applications (MS Office, email etc).

Advt. No. 01R/2023
Post Codes T-12A and T-12B

Advt. No. 02R/2024
Post Codes T-30A and T-30B

Technician (1)

Area: Plumber

Syllabus for Paper III

- Introduction to Plumbing: Scope, importance, role of plumbers in construction and maintenance.
- Materials: Types of pipes (PVC, GI, CPVC, HDPE), fittings, valves, fixtures.
- Tools & Equipment: Hand tools, power tools, measuring instruments, maintenance.
- Water Supply Systems: Sources, distribution, storage tanks, pumps, Installing pumps, storage tanks, overhead tanks.
- Sanitation & Drainage: Sewage systems, traps, vents, septic tanks, Installing toilets, urinals, septic tanks.
- Safety Practices: Workshop safety, handling tools, first aid.
- Pipe Work: Cutting, threading, bending, and joining pipes.
- Installation and Maintenance: Fitting taps, valves, cisterns, showers, sinks, basins, Repairing leaks, replacing fixtures, and unclogging drains.
- Real-life plumbing projects in residential or industrial setups.
- Basic Workshop calculation skills
- Drawing Skills: Lines, dimensions, scales.
- Orthographic Projection: 2D and 3D views of plumbing layouts.
- Blueprint Reading: Construction drawings for water supply and drainage systems.
- Communication Skills: Oral and written communication, Discipline, ethics, customer service.
- IT Literacy: Basics of computers, IT/Software applications (MS Office, email etc).

Advt. No. 01R/2023
Post Code T-13

Advt. No. 02R/2024
Post Code T-31

[Technician (1)]

Area: Computer System/System Management/
Computer Hardware & Network Maintenance

Syllabus for Paper III

- **Computer Fundamentals:** Hardware components, input/output devices, storage devices.
- **Operating Systems Basics:** DOS, Windows, Linux installation, file management.
- **Electrical & Electronics Basics:** Ohm's law, resistors, capacitors, transistors, diodes.
- **Assembling & Disassembling PCs:** Motherboard, CPU, RAM, HDD/SSD installation.
- **Peripheral Devices:** Printers, scanners, monitors, troubleshooting.
- **Networking Fundamentals:** LAN, WAN, MAN, topologies, IP addressing.
- **Cabling & Connectivity:** Crimping, punching, fiber optics basics.
- **Network Devices:** Switches, routers, hubs, access points.
- **Protocols & Services:** TCP/IP, DNS, DHCP, FTP, HTTP.
- **Basic Server Management:** User accounts, permissions, backup.
- **Troubleshooting & Maintenance:** Hardware diagnostics, software issues, virus removal.
- **Advanced Networking:** VLANs, subnetting, routing protocols.
- **Wireless Networking:** Wi-Fi setup, security, troubleshooting.
- **System Administration:** Installing servers, managing domains, Active Directory.
- **Data Security:** Firewalls, antivirus, encryption basics.
- **Virtualization & Cloud Basics:** Virtual machines, cloud storage, SaaS concepts.
- **Advanced Hardware Maintenance:** Chip-level troubleshooting, BIOS/UEFI settings.
- **Storage Solutions:** RAID, NAS, SAN basics.
- **Backup & Disaster Recovery:** Strategies, tools, testing.
- **Network Security:** Intrusion detection, VPN, secure configurations.
- **Communication Skills:** Oral and written communication, Discipline, ethics, customer service.
- **IT Literacy:** Knowledge AI/ML and other emerging technologies.

Advt. No. 01R/2023
Post Code TBL-04

Advt. No. 02R/2024
Post Code TBL-04

[Technician (1)]

Area: Medical Lab Technician

Syllabus for Paper III

- Introduction to Healthcare & Laboratory Science: Role of allied health professionals, scope of medical lab science.
- Anatomy & Physiology: Basic structure and function of human body systems.
- Biochemistry & Clinical Chemistry: Blood sugar, liver function, renal function tests.
- Hematology: Blood cell counts, coagulation studies, peripheral smear examination.
- Microbiology & Parasitology: Culture techniques, staining, identification of pathogens.
- Histopathology & Cytology: Tissue processing, slide preparation, staining methods.
- Immunology & Serology: ELISA, rapid tests, antigen–antibody reactions.
- Clinical Pathology: Urine, stool, and body fluid analysis.
- Blood Banking & Transfusion Medicine: Blood grouping, cross-matching, donor screening.
- Biomedical Waste Management: Infection control, sterilization, disposal protocols.
- Laboratory Equipment Handling: Microscopes, centrifuges, spectrophotometers, analyzers.
- Quality Assurance & Ethics: Good laboratory practices, patient confidentiality, record keeping.
- Communication Skills: Oral and written communication, Discipline, ethics, customer service.
- IT Literacy: Basics of computers, IT/Software applications (MS Office, email etc).

Advt. No. 01R/2023
Post Code TBL-05

Advt. No. 02R/2024
Post Code TBL-05

[Technician (1)]
Area: Nursing Assistant

Syllabus for Paper III

- Fundamentals of Nursing: Principles of patient care, hygiene, bed-making, vital signs measurement.
- First Aid & Emergency Care: CPR, bleeding control, fracture management, burns, poisoning.
- Infection Control: Sterilization, hand hygiene, biomedical waste disposal.
- Nutrition & Dietetics: Basics of balanced diet, feeding assistance, fluid balance.
- Community Health Nursing: Immunization, maternal & child health, health education.
- Pharmacology Basics: Safe handling of medicines, dosage forms, storage.
- Anatomy & Physiology: Introductory knowledge of body systems.
- Hospital Support Services: Patient transport, ward management, record keeping.
- Communication Skills: Oral and written communication, Discipline, ethics, customer service.
- IT Literacy: Basics of computers, IT/Software applications (MS Office, email etc).