



Directorate General of Training



Government of Goa



Skill India
कौशल भारत - कुशल भारत

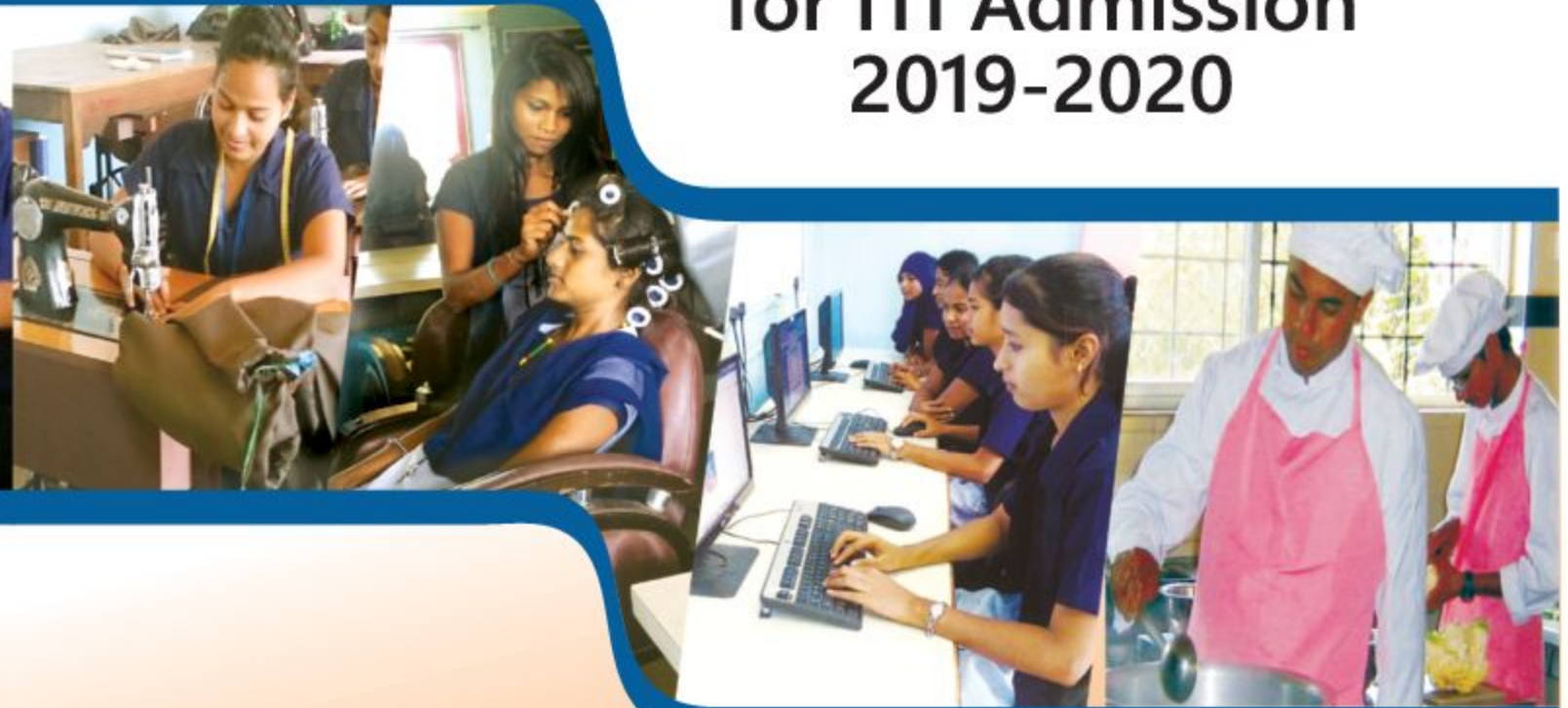
DIRECTORATE OF SKILL DEVELOPMENT & ENTREPRENEURSHIP



Industrial Training Institute

COMMON PROSPECTUS

for ITI Admission 2019-2020



**Pass ITI get SSC/HSSC
and upward mobility to
Diploma and University courses***

**Conditions apply*

No.:

Rs. 100/-

Governments ITIs in Goa



CONTENTS

A. INDEX.....	1
B. LIST OF GOVERNMENT INDUSTRIAL TRAINING INSTITUTES IN GOA.....	3
C. LIST OF PRIVATE INDUSTRIAL TRAINING INSTITUTES IN GOA.....	4
1. INTRODUCTION	5
2. ASSOCIATION WITH INDUSTRY	5
3. GENERAL INFORMATION	5
3.1. Working Hours.....	5
3.2. Holidays	5
3.3. Leaves Admissible to Trainees.....	6
3.4. Suspensions/Discharge	6
3.5. Identity Card	6
3.6. Discipline.....	6
3.7. Ragging	6
3.8. Transport Facility	7
3.9. Concessions	7
4. TRAINING & EXTRA-CURRICULAR ACTIVITIES	8
4.1. Trades Offered at the ITIs	8
4.1.1 Employment Opportunities:	41
4.2. Subjects to be studied during the Course of Training:	45
4.3. Key Skill Development Training Schemes available/offered by ITIs:.....	46
4.3.1 Craftsmen Training Scheme (CTS).....	46
4.3.2 Center of Excellence Scheme (CoE) under Vocational Training Improvement Project (VTIP).....	46
4.3.3 Scheme for Upgradation of 1396 Government ITIs under Public Private Partnership (PPP).....	46
4.3.4 National Apprenticeship Promotion Scheme (NAPS);.....	46
4.3.5 Model ITI Scheme.....	46
4.3.6 Skills Strengthening for Industrial Value Enhancement (STRIVE) Scheme.....	46
4.3.7 Dual System of Training (DST).....	46
4.3.8 Pradhan Mantri Kaushal Vikas Yojana (PMKVY)	47
4.4. All Goa Inter ITI Sports Meet	47
5. EXAMINATIONS.....	47
5.1. Online/Offline Exams	47
5.2. Annual Exams.....	47
5.3. Internal Exams	47
5.4. Scholarships	47
5.5. National Trade Certificate (NTC).....	48
5.6. Skill Competitions for Meritorious Craftsmen.....	48
5.7. Private Candidates related Guidelines	48

6. POST-ITI OPPORTUNITIES	49
6.1. Direct Admissions to Second Year in Polytechnic Institutes	49
6.2. Training at National Skill Training Institute	50
6.3. Apprenticeship Training in Specified Industries	50
6.4. Academic Equivalence to ITI Courses	51
6.5. Availability of 'Entrepreneurship' Schemes (MUDRA, NIESBUD etc.)	52
7. ADMISSION FOR CTS TRADES	53
7.1. Important Notice issued by the Central Ministry	53
7.2. Availability of Seats	54
7.3. Trade Details and Eligibility Criteria for Admissions	54
7.4. Age	56
7.5. Standard of Physical Fitness	56
7.6. Domicile	56
7.7. Reservation of Seats	56
7.8. Fees	57
7.8.1. Tuition Fees	57
7.8.2. Examination Fees	59
7.8.3. Caution Money Deposit	59
7.9. Sale of Prospectus.....	59
7.10. Instructions for filling up of Application Form & Acknowledgement Card	59
7.11. Submission of Application Form	59
7.12. Method of Selection	60
7.13. Completion of Admission Procedure	61
8. FREQUENTLY ASKED QUESTIONS (FAQs)	62
9. ANNEXURES/ADMISSION-PROCESS SCHEDULE/APPLICATION-FORM	
ANNEXURE – I.....	63
ANNEXURE – II.....	64
ANNEXURE – III.....	65
ANNEXURE – IV	65
ANNEXURE – V	66
ANNEXURE – VI	67
ANNEXURE – VII	68
ANNEXURE – VIII	69
SCHEDULE OF ADMISSION	70
APPLICATION-FORM	

LIST OF GOVERNMENT INDUSTRIAL TRAINING INSTITUTES IN GOA:

Sr. No.	Name & Address of ITI	Contact Phone No/s.
---------	-----------------------	---------------------

NORTH-GOA

1.	Panaji Government Industrial Training Institute, Altinho, Panaji – Goa; Pin Code – 403 001.	2226333
2.	Mapusa Government Industrial Training Institute, Peddem, Mapusa – Goa; Pin Code – 403 507.	2262637
3.	Pernem Government Industrial Training Institute, Tuem, Pernem – Goa; Pin Code- 403 512.	2201238
4.	Bicholim Government Industrial Training Institute, Valshi, Bicholim – Goa; Pin Code – 403 504.	2362315
5.	Sattari Government Industrial Training Institute, Honda, Sattari – Goa; Pin Code – 403 530.	2370242

SOUTH-GOA

6.	Farmagudi Government Industrial Training Institute, Farmagudi, Ponda- Goa; Pin Code – 403 401.	2980070
7.	Margao Government Industrial Training Institute, Borda, Margao – Goa; & its Extension Building At: Aquem Baixo, Margao – Goa; Both Pin Codes – 403 602.	2714887 (Margao); 2765846 (Aquem Baixo)
8.	Cacora Government Industrial Training Institute, Cacora, Curchorem– Goa; Pin Code – 403 706.	2650270
9.	Canacona Government Industrial Training Institute, Mastimol, Canacona – Goa; Pin Code – 403 702.	2633354
10.	Vasco Government Industrial Training Institute, Bogda, Vasco – Goa; Pin Code – 403 802.	2524030

LIST OF PRIVATE INDUSTRIAL TRAINING INSTITUTES IN GOA:

Sr. No.	Name & Address of ITI	Contact Phone No/s.
1.	Sesa Private Industrial Training Institute, Sankhali, Bicholim – Goa; Pin Code- 403 505.	2365509 2365123
2.	Montfort Private Industrial Training Institute, Corlim, Tiswadi – Goa; Pin Code – 403 110.	2285544
3.	Keerti Vidyalaya Private Industrial Training Institute, Siolim, Bardez – Goa; Pin Code – 403 517.	2270533; 2272047
4.	Bhumika Private Industrial Training Institute, Palye, Pernem- Goa; Pin Code – 403 524.	9823329150
5.	Indo-German Private Industrial Training Institute, Marna, Siolim– Goa; Pin Code – 403 517.	7741840535; 9823932449



Government of Goa
Directorate of Skill Development and Entrepreneurship
COMMON PROSPECTUS 2019-20
for
Government and Private Industrial Training Institutes
(With Application Form)

1. INTRODUCTION

Industrial Training Institutes (ITI) have been set up basically under the Craftsmen Training Scheme (CTS) and Center of Excellence Scheme (CoE) in Goa with an objective to ensure a steady flow of skilled personnel to the Public and Private Sectors, and to reduce unemployment amongst the educated youth by equipping them with the required skills, education and discipline.

There are ten Government and five Private Industrial Training Institutes in the State of Goa imparting training in various Engineering and Non-engineering trade courses suitable to the Indian industrial environment. Most of the trades and units available in these Institutes are affiliated to the National Council for Vocational Training (NCVT), New Delhi through Directorate General of Training (DGT), Ministry of Skill Development & Entrepreneurship, Government of India, New Delhi and the training is imparted as per the syllabus and curriculum approved by Government of India in consultation with NCVT. However, some of the trades/units in these ITIs are affiliated to State Council for Vocational Training (SCVT), Panaji-Goa.

2. ASSOCIATION WITH INDUSTRY

The 10 Government ITIs in the state are upgraded into Centers of Excellence (CoE), either through domestic/World Bank funding or through Public Private Partnership (PPP) mode for producing multi-skilled work-force of international standards and there is active involvement of industry executives as the Chairpersons and Members of each ITI's Institute Managing Committee (IMC).

The Vasco Government ITI is the sole ITI being upgraded under Government of India's scheme for "Upgradation of 1396 Government ITIs with Public Private Partnership" with M/s. Zuari Agro Chemicals Ltd. as its Industry Partner.

The Sesa ITIs are associated with Vedanta Ltd, however merely seeking admission in these ITIs does not imply any employment in the Vedanta Ltd., after completion of the training.

The Montfort Private Industrial Training Institute is associated with Syngenta India Ltd., Corlim, Tiswadi-Goa for providing training to the trainees.

3. GENERAL INFORMATION

3.1. Working Hours:

A sessional year in the ITI consists of 52 weeks and commences in the first week of **August** and ends in the month of **July** of the subsequent year.

The ITIs function in two shifts as per the following timings:

- A. Ist shift: 8:00 a.m. to 3:30 p.m. including ½ hour lunch break
- B. IInd shift: 10:00 a.m. to 5:30 p.m. including ½ hour lunch break

Total training hours : 40 hours per week

Total training hours for NSQF Compliant Syllabus per week as per respective Trade Syllabus:

- A. Practical: 25/28/30/32 hours
- B. Theoretical Subjects and Extra Curricular Activity: 15/12/10/08 hours

3.2. Holidays:

Trainees are allowed to avail the same number of holidays as declared by the Government of Goa from time to time.

3.3. Leaves Admissible to Trainees:

- A. Casual leave: Casual leave of 12 days per year subject to a maximum of 10 days at a time.
- B. Medical leave: Medical leave of 15 days in case of illness duly supported by medical documents from registered medical practitioner. A further period not exceeding 3 weeks for one-year trade course and 6 weeks for 2-year trade courses shall be granted in continuation or in addition to 15 days absence on medical grounds.
- C. Special leave: Special leave on private affairs shall be allowed to a trainee up to 10 days. However, this limit can be extended to 15 days or 30 days if supported by proper justification and subject to the satisfaction of the Head of the Institute on the basis of genuine reasons. No scholarship will be admissible during the period of special leave to a trainee who is a scholarship holder.

3.4. Suspensions/Discharge:

A trainee found guilty of unsatisfactory progress in training, or having less than 80% attendance at any time during the course of training or indulging in acts of indiscipline and misconduct shall be discharged from the institute. If any investigations of allegations against a trainee suspected to be involved in acts of indiscipline or misconduct are pending, the trainee shall be placed under suspension. However, in the institutes where stipend/scholarship is paid to the trainees, no stipend/scholarship will be paid to a trainee who has been suspended for misconduct.

3.5. Identity Card:

Every trainee will be provided with an Identity Card (ID) after seeking admission to the Institute and it is mandatory for every trainee to display the card on person throughout the training period. In the Government ITIs each trainee will have to pay Rs. 50/- towards issue of ID card at the time of admission. In case of loss of an ID card, a duplicate ID card would be issued on production of (i) An affidavit (ii) F.I.R. copy (iii) Latest photograph and (iv) A fee of Rs.100/-. However, in the private ITIs the charges towards the ID card would be fixed by the respective ITI.

3.6. Discipline:

All the admitted candidates are required to strictly abide by the provisions of rules and regulations prescribed by the Director of Skill Development and Entrepreneurship (DSDE)/Principal of the Institute as regards to their conduct and discipline and strictly follow the training schedule as per the time-table. The trainee is further required to adhere to the following guidelines:

- (a) Trainees are required to wear the institute uniform at all times and the workshop clothing during the practical hours.
- (b) Use of mobile phones in the ITI Complex by trainees is strictly prohibited. Staff maybe permitted to use their mobile phones only during non-working hours.

3.7 Ragging:

Ragging in any form is banned and punishable. In this regards, the Content of the Circular No. 10/SDCT/EST/GPRA/2015/Part/2984 dated 13/07/2015, is brought to the notice of all concerned.

CIRCULAR

The Goa Prohibition of Ragging Act, 2008, has made it mandatory for all educational institutions to compulsory display some of its main contents on the Notice Board which are mentioned as below:

- Goa Act 9 of 2009 2 (e) "ragging" means any disorderly conduct, whether by words spoken or written or by an act which has the effect of teasing, treating or handling with rudeness any other student indulging in rowdy or indiscipline activities which causes or is likely to cause annoyance, hardship or psychological harm or to raise fear or apprehension thereof in a fresher or a Junior student or asking the student to do any act or perform something which such student will not do in the ordinary course and which has the effect of causing or generating a sense of shame or embarrassment or adversely affect the physique or psyche of a fresher or a junior student.
- Goa Act 9 of 2009 3 (iii) the educational institution shall display on the notice board, the name and addresses and contact numbers of the persons, to whom the fresher's in the institution should approach for help and guidance for various purposes keeping in view needs of fresher's in the institution at the time of admission so that the fresher need not look up to the seniors for help in such matters and feel indebted to or obliged by them.
- Goa Act 9 of 2009 4-Ragging within or outside of any educational institution is prohibited and no person shall commit, abet, propagate or participate in ragging within or outside of any educational institution. During admission process, the prospectus shall clearly mention that ragging is banned in the institution and anyone indulging in ragging is likely to be punished. 'The application form for admission/enrollment shall have a printed undertaking to be filled up and signed by the student to the effect that he/she is aware of the

institution's approach towards ragging and the punishments to which he/she shall be liable if found guilty of ragging. A similar undertaking shall be obtained from the parent/guardian of the student. **[Copies of the Affidavit to be filled by the student and by its Parents/Guardians are enclosed Annexure VI and Annexure VII]**

4. Goa Act 9 of 2009 3 (i) the prospectus, the form for admission and/or any other literature issued to the aspirants for admission shall clearly mention that ragging is banned in the institution and anyone indulging in ragging is likely to be punished.

5. Goa Act 9 of 2009 3 (ii) the application form for admission/enrollment shall have a printed undertaking to be filled up and signed by the student to the effect that he/she is aware of the institution's approach to towards ragging and the punishments to which he/she shall be liable if found guilty of ragging. A similar undertaking shall be obtained from the parent/guardian of the student. Further, every educational institution should have an Anti-Ragging Committee and an Anti-Ragging Squad.

6. Goa Act 9 of 2009 3A (1) Every educational institution shall have an Anti-Ragging Committee and an Anti-Ragging Squad. The Anti-Ragging Committee at the level of the institution shall consist of representatives of civil and police administration, local media, Non-Government Organizations involved in youth activities, representatives of faculty members, and representatives of parents, representatives of fresher's, seniors and non-teaching staff. Such committee shall be headed by the Head of the educational institution.

7. Goa Act 9 of 2009 3A (2) There shall be Anti-Ragging Squad, a body with vigil, oversight and patrolling functions, to be nominated by the head of the educational institutions with such representatives as considered necessary to keep it mobile, alert and active at all time. The Squad may be called upon to make surprise raids on hostels and other hot spots and shall be empowered to inspect places of potential ragging. The Squad shall work and shall be empowered to inspect places of potential ragging. The Squad shall not have any outside representation and shall consist of members belonging to the various sections of the campus community. There shall be diverse mix of membership in terms of levels as well as gender in both the Anti-Ragging Squad and the Anti-Ragging Committee.

8. Goa Act 9 of 2009 5-Whenever any student or as the case may be complains in writing, of ragging to the Head of the educational institution, the Head of the institution shall, within seven days of the receipt of the complaint, inquire into the complaint and if, prime facie, any complaint is found true, should resort to disciplinary action at his/her level. The candidates seeking admissions to ITIs and their parents/guardians are required to submit the affidavit duly filled up at the time of seeking admission to ITIs.

Apart from the above guidelines each trainee would be required to strictly abide by the rules and regulations issued by the individual Institutes from time-to-time to maintain a disciplined and conducive environment for imparting quality training.

3.8. Transport Facility:

Transport facility is provided by the Government at Government ITIs: Farmagudi, Sattari, Vasco, Cacora, Margao, Pernem, Canacona and Panaji and the trainees are charged @ concessional rate of Rs. 3/- per trip from/to the I.T.I. and to/from the nearest bus stand. A monthly pass will be issued to the trainees to avail this facility at concessional rate of Rs. 120/- per month. Transport facility provided is Free for trainees belonging to Scheduled Tribes.

Transport facility is presently not available in any of the Private ITIs.

3.9. Concessions:

a) Trainees will be given the following concessions at the **Government** Institutes:

i) Exemption from payment of tuition fees for candidates belonging to SC /ST /BPL category and for candidates having annual family income of less than Rs.3,00,000/-

ii) Provision of free uniform and workshop clothing to all the trainees. However, the cost of stitching the uniforms would have to be borne by the trainees. The uniforms should be stitched within 15 days of issuing the cloth.

iii) Free facilities for recreation, library, sports, etc.

b) Trainees would be given concessions at the respective **Private** ITIs as shown below:

Sesa Private ITI:

(a) Provision of food at subsidized rates.

(b) Provision of assistance for job placement in reputed industry.

Montfort Private ITI:

(a) Hostel facility is available in the campus to accommodate the trainees who are orphans and do not have any family support, who are from below poverty line, and from distant places.

(b) Other concessions as decided by the Institute are given to the trainees depending on their family background and annual income.

4. TRAINING & EXTRA-CURRICULAR ACTIVITIES

4.1 Trades offered at the ITIs: For latest syllabus, may visit <http://www.cstaricalcutta.gov.in> or <https://dgt.gov.in/>

Craftsmen Training Scheme (CTS) COURSES**1. Computer Operator and Programming Assistant (COPA) [Duration: 1 year (2 semesters of six months each)], NSQF level-4:**

Course contents: In first semester the trainee learns about safety and environment, use of fire extinguishers. They learn about trade tools, identify computer peripherals, internal components, basic DOS commands, Windows and Linux interface and its related software installation process. Trainees will work with MS Office package to create word document, practice with excel sheet and get idea to create a good power point presentation, maintain database with MS Access. They will set up and configure a network system of an organization. They will use internet to search information using browser along with official/social communication process. Trainees will create basic static webpage using HTML. At the end of this semester trainees can go on industrial visit or projects specified in the syllabus.

In the second semester the trainee learns scripting language i.e. JavaScript and will develop dynamic webpage and hosting technique in a registered domain. They will use VBA to create & edit various types of macros in MS Excel and to develop user form using VBA. They can maintain accounts of an organization using accounting software Tally. Trainees will learn E-commerce system and will be able to browse, select and transact using different E-commerce websites. They will identify different type of cyber crimes now days and will be able to secure information from Internet by using cyber security concept. At the end of this semester trainees can go on industrial visit or projects specified in the syllabus.

Skills acquired: Computer Operator: Computer Operator operates computer and peripheral equipment to process business, scientific, engineering, or other data, according to operating instructions. Enters commands, using keyboard of computer terminal, and presses buttons and flips switches on computer and peripheral equipment, such as tape drive, printer, data communications equipment, and plotter, to integrate and operate equipment, following operating instructions and schedule. Loads peripheral equipment with selected materials, such as tapes and printer paper for operating runs, or oversees loading of peripheral equipment by Peripheral Equipment Operators. Enters commands to clear computer system and start operation, using keyboard of computer terminal. Observes peripheral equipment and error messages displayed on monitor of terminal to detect faulty output or machine stoppage. Enters commands to correct error or stoppage and resume operations. Notifies supervisor of errors or equipment stoppage. Clears equipment at end of operating run and reviews schedule to determine next assignment. Records problems which occurred, such as down time, and actions taken. May answer telephone calls to assist computer users encountering problem. May assist workers in classifying, cataloguing, and maintaining tapes.

Programming Assistant: Programming Assistant installs, maintains and updates computer programs by making minor changes and adjustments to them under the guidance of computing professionals. Maintains and updates documents of computer programs and installations. Applies knowledge of principles and practices in the area of programming and computing in order to identify and solve problems arising in the course of their work. They may receive guidance from managers or professionals. May supervise other workers also.

2. Information & Communication Technology System Maintenance [Duration: 2 years (4 semesters of six months each)] NSQF Level-5

Course Content: In First semester, the trainee learns about safety and environment, use of fire extinguishers. They learn to work with various basic Electrical Components, perform all functions of Resistors and Soldering, De-soldering practice, able to recognize different types of Inductors, measure Inductance and uses of Transformer. They know about Capacitor, measure Capacitance and find resonance value of a circuit. Testing and use of Diode to construct basic Electronic components. Recognize different types of Transistors and use it as Amplifiers in electronic circuit. Construct and test of an application circuit using different types of Semiconductors. Assemble and test various Power Supply circuit. Construct all digital circuit using logic gates and verify truth table. Familiarize charging of acid battery and verify connections. Verify internal parts of CRO and use it to measure voltage, frequency, modulation of modulator/ transmitter. Working with some important Mechanical, Electrical & Electronics Accessories used in information communication system.

In second semester, the candidate will be able to achieve the skill to work with Word Processing and Spreadsheet Software. Trainees are able to assemble and replace hardware components of Desktop Computer. Installation of Operating System and all other application software. Customization of Operating System and maintenance of system application software. Assemble and replace hardware components of Laptop PC. Replace/ install SMPS and troubleshoot its faults. Familiarize and upgrading various components of Motherboard. Recognize different types of memory devices, chips and its structure.

In third semester, trainee learns about installation and customization of Linux operating system. Installation of Printer, Scanner and troubleshoot their faults. Replace/ install Display Driver Card and servicing, configuration of various display unit. Replace/ install Sound Card and set properties to adjust sound quality. Maintenance and servicing of UPS. Installation and configuration of Modem, System Resources, Add on Cards, Cables & Connectors. Upgrading, maintenance and troubleshooting of PC. Assemble, replace and troubleshooting various parts of Tablet/ Smart Devices. Browsing internet and work with Cloud Computing.

In fourth semester, the candidate will be able to set up and configure Networking System using various network devices. Sharing and controlling resource and Internet connection through network. Implement Network Security to protect from various attacks on networking. Installation and basic configuration of Windows Server. Installation, configuration of DNS, Routing and user account customization. Configuration of Server and managing Server Network security and Infrastructure. Installation and basic configuration of Linux server.

Skills Acquired: ICT Engineer; is responsible for installing and ensuring uptime of the assigned ICT node/network segment, by undertaking preventive maintenance and fault management activities. The ICT Engineer is also responsible for performing upgrades, capacity augmentation, configuration changes and Point Interconnect testing with minimal disruption of services. The ICT or Information and Communication Technology equipment are NodeB/eNodeB, IP and TDM transmission equipment, IP and Packet Core switch, Cloud and Data Centre equipment .

ICT Technician; is responsible to maintain the ICT nodes/installations live on 24x7 basis, observe and repair Level-1 faults/issues in installed ICT equipment at site, carry out specified preventive and corrective maintenance procedures and report relevant network incidents to the supervisor in time for information as well as response. ICT or Information and Communication Technology refers to NodeB/ eNodeB, IP and TDM transmission equipment, IP and Packet Core switch, Cloud and Data Centre equipment.

Computer System Hardware Analyst/Hardware Engineer; data processing requirements to plan data processing systems that provide system capabilities required for projected workloads and plans layout and installation of new system or modification of existing system. Confers with Data Processing and Project Managers to obtain information on limitations and capabilities of existing system and capabilities required for data processing projects and projected work load. Evaluates factors such as number of departments serviced by data processing equipment, reporting formats required, volume of transactions, time requirements and cost constraints, and need for security and access restrictions to determine hardware configurations. Analyses information to determine, recommend, and plan layout for type of computers and peripheral equipment, or modifications to existing equipment and system, that will provide capability for proposed project or work load, efficient operation, and effective use of allotted space. May enter data into computer terminal to store, retrieve, and manipulate data for analysis of system capabilities and requirements. May specify power supply requirements and configuration. May recommend purchase of equipment to control dust, temperature, and humidity in area of system installation. May specialize in one area of system application or in one type or make of equipment. May train users to use new or modified equipment. May monitor functioning of equipment to ensure system operates in conformance with specifications.

System Analysts; analyses user requirements, procedures, and problems to automate processing or to improve existing computer system. Confers with personnel of organizational units involved to analyse current operational procedures, identify problems, and learn specific input and output requirements, such as forms of data input, how data is to be summarised, and formats for reports. Writes detailed description of user needs, programme functions, and steps required to develop or modify computer programme. Reviews computer system capabilities, workflow, and scheduling limitations to determine if requested programme or programme change is possible within existing system. Studies existing information processing systems to evaluate effectiveness and develops new systems to improve production or workflow as required. Prepares workflow charts and diagrams to specify in detail operations to be performed by equipment and computer programmes and operations to be performed by personnel in system. Conducts studies pertaining to development of new information systems to meet current and projected needs. Plans and prepares technical reports, memoranda, and instructional manuals as documentation of programme development. Upgrades system and corrects errors to maintain system after implementation. May assist COMPUTER PROGRAMMER in resolution of work problems related to flow charts, project specifications or programming. May prepare time and cost estimates for completing projects. May direct and coordinate work of others to develop, test, install, and modify programs.

Data Communication Analyst/Network Administrator; researches, tests, evaluates, and recommends data communications hardware and software: Identifies areas of operation which need upgraded equipment, such as modems, fibre optic cables and telephone wires. Conducts survey to determine user needs. Reads technical manuals and brochures to determine equipment which meets establishment requirements. Visits vendors to learn about available products or services. Tests and evaluates hardware and software to

determine efficiency, reliability, and compatibility with existing system, using equipment such as computer terminal and modem. Analyses test data and recommends hardware or software for purchase. Develops and writes procedures for installation, use, and solving problems of communications hardware and software. Monitors system performance. Trains users in use of equipment. Assists users to identify and solve data communication problems. May write technical specifications to send to vendors for bid. May oversee or assist in the installation of communications hardware. May perform minor equipment repairs.

3. Desk Top Publishing Operator:[Duration:1 year(2 semesters of six months each)], NSQF level-4:

Course Content: In first semester, the trainee learns about safety and environment, use of fire extinguishers. They learn about trade tools, identifies computer peripherals, internal components, Windows interface and its related software, installation process. Trainees will work with MS Office package to create word document. They will use internet to search information using browser along with official/ social communication process. The trainees will work with publication software like Adobe PageMaker to create, edit, format different publication using Publication Software. They also learn and experience application software with Quark Xpress to create and edit complex page layout for publication. In this semester, the trainees also learn to use scanner and to scan documents. At the end of this semester trainees can go on industrial visit or projects specified in the syllabus.

In second semester, the trainee learns to edit, manipulate and enhance graphics or images to improve their overall appearance using Adobe Photoshop. They will go through the application CorelDraw to edit vector graphics. The trainees will learn and experience Adobe InDesign to create works such as posters, flyers, brochures, magazines, newspapers, and books. They also learn one bilingual software to create publications or documents in regional language. Finally, the trainees will learn and experience to print the publication/ document/ images/ graphics and publish it. At the end of this semester, trainees can go on industrial visit or projects specified in the syllabus.

Skills Acquired: Desktop Publishing Operator lays out pages, selects size and style of type, and enters text and graphics into computer to produce printed materials, such as advertisements, brochures, newsletters, and forms, applying knowledge of graphic art techniques and typesetting and using computer: Reviews layout and customer order. Enters text into computer, using input device such as mouse, keyboard, scanner, or modem. Scans artwork, using optical scanner which changes image into computer-readable form. Enters commands to position text and illustrations on page grid of computer monitor. Creates spaces between letters, columns, and lines, applying knowledge of typesetting, and enters commands, using input device. Arranges page according to aesthetic standards, layout specifications of Graphic Designer, and applying knowledge of layout and computer software. Prints paper or film copies of completed material. May alter illustration to enlarge, reduce, or clarify image. May operate automatic film developer to process photographs. May assemble artwork into paste-up and perform key lining manually.

4. Fitter [Duration: 2 years (4 semesters of six months each)] NSQF level-5:

Course Content:

In first Semester - The practical part starts with basic fitting in the beginning and the candidate also imparted training on allied trades viz., Sheet Metal, Welding (Gas & Arc) which leads to multi-skilling. In the basic fitting the skills imparted are sawing, filing, marking, chipping, measurement, riveting, soldering, brazing, drilling and observation of all safety aspects is mandatory. The accuracy achieved is of ± 0.25 mm. The safety aspects covers components like OSH&E, PPE, Fire extinguisher, First Aid and in addition 5S being taught.

In Second Semester - Different drilling operations (through, blind, angular), reaming, offhand grinding, tapping, dieing, different fits viz., sliding fit, etc., scraping, fastening (nuts & bolts, riveting, studs, screws, etc.). The accuracy achieved is of ± 0.04 mm and angular accuracy to 30minutes. Different turning operations on lathe (step, grooving, chamfering, drilling, boring, knurling & threading), simple repair, overhauling and lubrication work on machine are being taught in the practical.

In third Semester – Power tool operation, different complex assembling and fitting, fastening, lapping, making gauges, pipe works and pipe joints, Dismantling, overhauling& assembling valves are covered. The accuracy achieved is of an accuracy of ± 0.02 mm & 10 minutes.

In fourth Semester – Making & using drill jigs, making of critical components, repair & maintenance of power transmission system, making of template & complex gauges, identify different Pneumatic & hydraulic components and circuit construction, repair & maintenance of machinery like lathe, drill, grinding, bench drilling, Inspection of Machine tools, Accuracy testing of Machine tools and erection of simple machines are being performed as part of practical training. Professional Knowledge subject is simultaneously taught in the same fashion to apply cognitive knowledge while executing task. In addition components like Physical properties of engineering materials, Interchangeability, Method of expressing tolerance as per BIS Fits, different types of iron, properties and uses, special files, honing, Metallurgical and metal working processes such as Heat treatment, the various coatings used to protect metals, different bearing, working material with finished surface as aluminium, duralumin and stainless steel, topics related to non-ferrous metals, Method of

lubrication are also covered under theory part. Total three projects need to be completed by the candidates in a group. In addition to above components the core skills components viz., Workshop calculation & science, Engineering drawing, employability skills are also covered. These core skills are essential skills which are necessary to perform the job in any given situation.

Skills Acquired: Fitter General sizes metal parts to close tolerances and fits and assembles them using hand tools for production or repairs of machines, or other metal products. Studies drawings to understand specification of different parts, fittings or assemblies to be made and their functions. They select materials, appropriate tool and equipments to carry out their work. Holds the work in Vice, Cuts and shapes required parts to dimensions and specifications by processes of sawing, chipping, filing, grinding, drilling holes, screw cutting, scrapping etc., using hand tools for making specimens or finished components. Measures object while working using foot rules, calipers, micrometer, gauges etc. and checks for correct filing with square. Gets half-finished object marked or marks it himself using face plate, marking block scribe, vernier, height gauges, vee-blocks, angle plate, sine plate, slip gauges, combination set, etc. depending on accuracies required, to indicate guide lines for finished sizes, holes to be drilled and pitch centres, threads to be cut and other working details as specified in drawing or sample. Clamps object securely in correct position in vice and files it to required dimensions according to punch marks and guide lines frequently measuring it with calipers, micrometer, vernier, gauges etc, makes holes with drill, cuts threads with taps and dies ensuring that they are square or at required angle to base. Measures finished article with dial indicator, micrometer, vernier, height gauges, screw gauges, plug gauges, sine bar, slip gauge, etc according to prescribed accuracies. May make parts separately and assemble those with screws, rivets, pins, etc. as specified so as to make complete unit according to drawing. Dismantles or removes worn out, broken or defective parts using hand tools or power tools and replaces them by repaired or new ones. Performs repairing and maintenance work (including preventive maintenance) of simple machines, dismantles and replaces different components to construct circuit of Pneumatics and Hydraulics. Tests completed article/ assembly to ensure correct performance. May do simple turning of parts on machines and perform welding, brazing, and like operations. May explain heat treatment processes viz., annealing, hardening, tempering etc. May specialize in particular type of machine or product and be designated accordingly. May suggest alterations. In addition Fitter have the ability to visualize the job, good coordination, mechanical attitude, manual dexterity and perform work related mathematical calculations. Plan and organize assigned work and detect & resolve issues during execution. Demonstrate possible solutions and agree tasks within the team. Communicate with required clarity and understand technical English. Sensitive to environment, self-learning and productivity. May be designated as FITTER General according to nature of work done.

5. Turner [Duration: 2 years (4 semesters of six months each)] NSQF level-5:

Course Content:-

In first Semester: The practical part starts with basic fitting & different turning including setting of different shaped job on different chucks. The different turning operations – Plain, Facing, Drilling, Boring (counter and stepped) Grooving, Parallel turning, Stepped turning, Parting, Chamfering, U-cut, Reaming, Internal recess & Knurling. The skills on grinding of different cutting tools viz., V tool, side cutting, parting and thread cutting (both LH & RH) are also imparted. During this period the testing alignment of lathe by checking different parameters viz., axial slip of main spindle, true running of head stock, parallelism of main spindle and alignment of both the centres are also covered. The observation of all safety aspects is mandatory during execution any task. The safety aspects covers components like OSH&E, PPE, Fire extinguisher, First Aid and in addition 5S being taught.

In second Semester: This section covers setting of different components (Form tool, Compound slide, Tail stock offset, taper turning attachment) & parameters (feed, speed, depth of cut) of lathe for taper/ angular turning of jobs. Different boring operations (plain, stepped and eccentric) are also undertaken to gain the skill in producing components involving such operations. Different thread cutting (BSW, Metric, Square, ACME, Buttress) by setting machining parameters are being taught in the practical. The use different accessories of lathe (Driving Plate, Steady rest, dog carrier and different centres) are also part of the practical training. During this period the basic maintenance and preventive maintenance of lathe and grinding machine are also covered.

In third Semester: On achieving above mentioned skill sets the candidate is engaged in producing different precision of engineering component with an appropriate accuracy ($\pm 0.02\text{mm}$). The machining of different irregular shaped job using different lathe accessories and also producing different utility items viz., Crank Shaft (single throw), Stub arbor, etc. are covered to enhance their competency and perform the job as per practical requirement. The machining of different components along with assembly of such components (male & female) by performing different turning activities is also covered. The accuracy achieved is of an accuracy of $\pm 0.02\text{ mm}$ outside and $\pm 0.05\text{mm}$ for inside turning.

In fourth Semester: A dedicated time of 13 weeks devoted for CNC operations which involve setting both job and tools and operating the CNC turn centre to produce components as per drawing by preparing part

programmes. The candidate gets enough training both on multi-media based CNC simulated and on actual intermediate production based CNC machine. The candidate is also imparted training on process plan to produce components by performing special operation on lathe viz., worm shaft cutting and also producing different engineering components viz., drill chuck, collet chuck, screw jack, box nut etc., to develop competency in producing components which is tangible and significant in work and industry ready for executing such work as per demand. Professional Knowledge subject is simultaneously taught in the same fashion to apply cognitive knowledge while executing task. In addition components like cutting tools and its specification, method of brazing and soldering, calculation involving gear ratio and gearing, and tool life, lubrication and functions, jigs and fixtures, interchangeability, quality control procedure and technical English are also covered under theory part. Total three projects need to be completed by the candidates in a group. In addition to above components the core skills components viz., Workshop calculation & science, Engineering drawing, employability skills are also covered. These core skills are essential skills which are necessary to perform the job in any given situation.

Skills Acquired:

Turner: Lathe Operator makes metal articles to required specifications using lathe and cutting tools. Studies drawings and other specifications of parts to be made. Selects metal, holds it in chuck, fixture on lathe as required, centres it by manipulating chuck jaws or otherwise using dial indicator or marking block and securely tightens it in position. Selects correct cutting tool, grinds it if necessary and holds it tight in tool post at correct height. Sets feed and speed and starts machine. Manipulates hand wheels or starts automatic controls to guide cutting tool into or along metal. Controls flow of coolant (cutting lubricant) on edge of tool. Arranges gears in machine to obtain required pitch for screw cutting. Calculates tapers and sets machine for taper turning, controls lathe during operation by means of hand wheels and levers and frequently checks progress of cutting with measuring instruments such as calipers and rule, micrometers, etc. Stops machine, removes completed part and checks it further with instruments to ensure accuracy. Repeats operations if necessary. Cleans and oils machine. Demonstrate the setting & operation of CNC turning machine and produce components as per drawing by preparing part programmes. May be designated as Turner according to nature of work done. May improvise devices and make simple adjustments to machine. May recondition lathe tools. Plan and organize assigned work and detect & resolve issues during execution. Demonstrate possible solutions and agree tasks within the team. Communicate with required clarity and understand technical English. Sensitive to environment, self-learning and productivity. May be designated as TURNER according to nature of work done.

6. Machinist [Duration: 2 years (4 semesters of six months each)] NSQF level-5:

Course Content:

In first semester, the contents covered are from safety aspect related to the trade, basic fitting operations viz., making, filing, sawing, chiseling, drilling, tapping, grinding to an accuracy of ± 0.25 mm. Making different fits viz., sliding, T-fit and square fit with an accuracy of ± 0.2 mm & angular tolerance of 1° . Lathe operation on different shaped job and produce components by different turning operation including thread cutting.

In second semester The practical training, it starts with operation of slotting machine and making different components to accuracy of ± 0.04 mm. Followed by different operation in conventional milling machine with extensive coverage of different operations viz., plain, face, angular, form, gauge, straddle milling with accuracy ± 0.02 mm like square thread cutting. Further advance turning operations with accuracy ± 0.04 mm is covered. Next, the grinding operation (both surface and cylindrical) is executed with accuracy of ± 0.01 mm.

In third semester, grinding of different cutting tools are covered in the beginning followed by advance milling operation like boring, gear cutting, spline etc. to accuracy ± 0.05 mm. Basic electrical equipment and sensors are also covered and CNC turning operation which covers starting from setting, operation and programming part covered for producing different components.

During fourth semester, the CNC milling operation is covered in the beginning which include setting, operation and part programming to producing different component. In addition to this, the components like documentation, technical English, simple repair and maintenance work, machining of some complicated components like bevel gears, plate components, worm wheel, worm thread etc. to an accuracy of ± 0.05 mm.

Skills Acquired:

Machinist General operates various types of power driven metal cutting or grinding machines for cutting and grinding metal. Studies drawings or measures out sample with appropriate measuring instruments to note different dimensions and sequence of operations required. Selects metal piece and marks it or gets it marked for machining operations required. Fastens metal in chuck, jig or other fixture and respective tool or cutter, according to sequence of operation, on appropriate machine (lathe, shaper, milling, slotting, drilling, grinding). Checks machine setting or sets it for stipulated machine operations. Selects machine feed and speed and starts machine. Controls flow of coolant (cutting lubricant) and manipulates hand wheels or applies automatic controls to feed tool to metal or metal to tool. Observes cutting or grinding both from

marking and machine readings, checks for dimensions as necessary and removes parts when machining is completed, checks completed part with measuring instruments and gauges to ensure prescribed accuracy. Makes adjustments if necessary and repeats operations, as required, on same or other machines. May assist in setting up machine for repetitive work, change tools, make simple adjustments, clean and oil machine. Does process planning, tool and cutting parameters selection, programming, setup and operation for cutting parts on CNC vertical machining center and CNC lathe. Plan and organize assigned work, detect & resolve issues during execution. Demonstrate possible solutions and agree tasks within the team. Communicate with required clarity and understand technical English. Sensitive to environment, self-learning and productivity. May be designated as **Machinist** according to nature of work done.

7. Electrician [Duration: 2 years (4 semesters of six months each)] NSQF level-5:

Course Content :

In first semester the trainee learns about safety and environment, use of fire extinguishers, artificial respiratory resuscitation to begin with. He gets the idea of trade tools & its standardization, identifies different types of conductors, cables & their skinning & joint making. Basic electrical laws like Kirchhoff's law, ohm's law, laws of resistances and their application in different combinations of electrical circuit are practiced along with laws of magnetism. The trainee practices on circuit for single phase and poly-phase circuits for 3 wire /4 wire balanced & unbalanced loads.

In second semester Skilling practice on different types & combination of cells for operation and maintenance is being done. Wiring practice with installation of different accessories like ICDP switch, distribution fuse box and mounting energy meters are practiced as per IE rules for hostel/residential building, workshop and its fault detection is done by trainee. The trainee will practice for pipe & plate earthing. Different types of light fitting are to be done like HP/LP mercury vapour and sodium vapour are prominent. The trainee will practice on different types of measuring instruments like multimeter, wattmeter, energy meter, phase sequences meter, frequency meter, for measurement of electrical parameters in single & three phase circuits. He will gain skill on range extension, calibration and testing of meters. Practice for dismantling, assembling and testing of heating element equipment, induction heating equipment, grinding machines and washing machines will be done by trainee. Skill will be gained on transformer for operation, efficiency, series parallel operation, replacement of transformer oil and combination of single phase transformers for 3 phase operation. The trainee will practice on winding of small transformer.

In third semester, the trainee will study the details of rotating machines: DC machines, induction motors, alternators & MG sets and practice on them. The trainee will practice on determining characteristics, their performance analysis, starting, speed control and reversing direction of rotation of machines. He will practice on parallel operation & synchronization of alternators, winding practice and over hauling will be practiced for DC machine and induction motors.

In fourth semester, Practices on diodes for bridge rectifier, switching devices & amplifiers by electronic components, different wave shape generation and testing by CRO is carried out. Designing control cabinet, assembling control elements and their wiring are to be practiced. Speed control of AC/DC motors by electronic controller is being practiced. The trainee will practice on testing, analyzing and repairing of voltage stabilizer, emergency light, battery charger, UPS and inverter. He will gain knowledge of thermal, hydel, solar & wind energy systems. The trainee will practice on distribution system, domestic service line and accessories & their protection by practicing on relay and circuit breaker for operation and maintenance.

Skills Acquired :

Electrician General: installs, maintains and repairs electrical machinery equipment and fittings in factories, workshops power house, business and residential premises etc. Studies drawings and other specifications to determine electrical circuit, installation details etc. Positions and installs electrical motors, transformers, switchgears. Switchboards and other electrical equipment, fittings and lighting fixtures. Makes connections and solders terminals. Tests electrical installations and equipment and locates faults using megger, test lamps etc. Repairs or replaces defective wiring, burnt out fuses and defective parts and keeps fittings and fixtures in working order. May do armature winding, draw wires and cables and do simple cable jointing. May operate, attend and maintain electrical motors, pumps etc. **Electrical Fitter:** fits and assembles electrical machinery and equipment such as motors, transformers, generators, switchgears, fans etc., Studies drawings and wiring diagrams of fittings, wiring and assemblies to be made. Collects prefabricated electrical and mechanical components according to drawing and wiring diagrams and checks them with gauges, megger etc. to ensure proper function and accuracy. Fits mechanical components, resistance, insulators, etc., as per specifications, doing supplementary tooling where necessary. Follows wiring diagrams, makes electrical connections and solders points as specified. Checks for continuity, resistance, circuit shorting, leakage, earthing, etc. at each stage of assembly using megger, ammeter, voltmeter and other appliances and ensures stipulated performance of both mechanical and electrical components fitted in assembly. Erects various equipment such as bus bars, panel boards, electrical posts, fuse boxes switch gears, meters, relays etc. using nonconductors, insulation hoisting equipment as necessary for receipt and distribution of electrical current

to feeder lines. Installs motors, generators, transformer etc. as per drawings using lifting and hoisting equipment as necessary, does prescribed electrical wiring, and connects to supply line. Locates faults in case of breakdown and replaces blown out fuse, burnt coils, switches, conductors etc. as required. Checks, dismantles, repairs and overhauls electrical units periodically or as required according to scheduled procedure. May test coils. May specialize in repairs of particular equipment manufacturing, installation or power house work and be designated accordingly.

8. Instrument Mechanic [Duration: 2 years (4 semesters of six months each)] NSQF level-5:

Course Content : In this semester the trainee learns about safety and environment, use of fire extinguishers, artificial respiratory resuscitation to begin with. He gets the idea of trade tools & its standardization, Familiarize with basics of electricity, construction of PMMC & MI instruments. Overhauling and testing & calibration of ammeters, voltmeters, wattmeter and ampere-hour meter of various types, meter sensitivity, accuracy, maximum power, capability etc. Test the cable and measure the electrical parameter, experiments on transformer, measuring current and voltage in primary and secondary windings filing practice, marking & measuring with the help of Vernier Caliper, Vernier Height Gauge. Skilling practice on different types & combination of cells for operation and maintenance of batteries being done. Identify and test passive and active electronic components. Construct and test unregulated and regulated power supplies. Practice soldering and de-soldering of various types of electrical and electronic components on through hole PCBs and different type of switches, application like buzzers, solenoid valves.

In second semester the candidate will be able to construct and test different types of diode, V-I characteristics, rectifiers, amplifier, op-amps, oscillator and wave shaping circuits. Testing of power electronic components. Construct and test power control circuits. Identify and test opto-electronic devices. Able to achieve the skill on SMD Soldering and De-soldering of discrete SMD components. Verifying the truth tables of various digital ICs by referring Data book. Verification of truth tables of various logic gates, RS and JK flip flops, Counters, BCD to decimal decoder, 7 segment display circuits, D/A and A/D circuit, RS485 to RS232 converter. Practice circuit simulation software to simulate and test various circuits. Assemble a computer system, install OS, Practice with MS office. Use the internet, browse, create mail IDs, download desired data from internet using search engines. Familiarization with microprocessor trainer kit, basic program on microprocessor. Measurement voltage, frequency using CRO, operating storage oscilloscope.

In third semester the trainee will be able to study various types of instruments constructions and identify various parts and section. Measuring speed and velocity using various tachometers. Operating stroboscope. Practice on various pressure sensors and pressure gauge. Testing and calibration of various type of pressure measuring instruments, dead weight tester and comparator. Testing and installation of pressure switches. Perform practical on pressure simulator or experimental setup. Operating and calibrating pressure transmitters. Checking various types of flow restrictors and use, D.P. cell/transmitter. Fitting of tapered glass tube checking and testing V- notches fitting, repairing various types of positive displacement flow meters, installation maintenance of flow instruments. Calibrating and installing turbine flow meter, vertex flow meter. Measurement of level performing on level measurement i.e. experimental setup for level measurement process simulator, calibration of level transmitters, level instrument maintenance, repairing and control. Temperature measurement with different sensors and temperature controlled oil bath/furnace for low and high temperature, temperature instrument maintenance and calibration. Primary calibration standards, primary standard instruments, secondary standard instruments, instrument inspection, calibration and test method.

In fourth semester the trainee will work with experimental setup/temperature simulator for temperature measurement controls. Thermocouple and RTD experiment on optical pyrometer and radiation pyrometer. Measurement of humidity. Recorders and servicing of pneumatic, electrical/ electronic recorders, study of paperless LCD/LED recorder. Study of control valves/final control elements and its various components. Piping tubing and fitting. Study the cut section of various type of control valves, operation on cascade, ratio, feed forward control trainer. Experiment on PID controller trainer on various process parameters, programmable logic controller trainer, programmes on timers and counters. Installing & operating HART transmitters/devises (I/O). Calibration of HART devices. Work on various network lines, uses of DCS & SCADA complete with communication system on process trainer. Working on Hydraulics and Pneumatics trainer, air filter regulator. Practice on PH meter, conductivity meter, on line measurement of PH, conductivity and dissolved Oxygen.

Skills Acquired :

Mechanic Precision Instrument, General; tests, repairs, overhauls and assembles various precision instruments and their parts for efficient performance. Examines instrument for defects. Dismantles components and cleans them in appropriate fluid such as petrol, kerosene etc. to find out extent of damage or wear and tear to parts. Removes minor defects of parts by grinding, filing, drilling, etc. and replaces worn out and damaged parts. Adjusts position of various parts using screwdriver, spanner etc. and assembles instrument to form complete unit. Makes simple electrical connections, solders contact points and performs

other tasks as necessary. Tests performance either by visual observation or by conducting simple electrical and mechanical tests and ensures that repaired or assembled instrument conforms to prescribed efficiency. May make new components and assemble new instruments. May specialize in any particular type of instrument like mechanical, hydraulic, pneumatic, electrical, optical, orthopedic etc.

Technician Instrumentation; dismantles removes and replaces a range of instruments and faulty peripheral components down to unit and component level, setting up test equipment, troubleshooting components of instruments, calibrating them and also preparing service reports and accurately documenting parts replacement and repair.

Mechanic Precision Instrument, Mechanical; makes, alters and adjusts mechanical instruments or mechanical parts of electrical and optical instruments by accurate milling, filing, grinding, lapping and other processes. Studies drawings or samples and examines precision instrument like balance, meters, pressure gauges etc. for defects. Dismantles instrument, cleans metal components in petrol, kerosene oil or otherwise and checks them to find out extent of damage and further serviceability. Makes new parts on lathe milling or other machines, if necessary. Sizes and fits metal parts by filing, scraping, grinding lapping etc. as necessary and ensures their desired accuracy by checking with precision measuring instruments shadow graph and other highly perfect devices. Assembles parts to form complete unit. Gets electrical components repaired by Electrician. Fits electrical and optical parts to instrument and adjusts them as required. Tests repaired or assembled instrument for clarity or vision sensitivity, correct meter and scale readings etc. as required and ensures stipulated performance within prescribed limits. Makes necessary adjustments and seals meters to avoid manipulations. May specialize in particular type of instruments like balance, pressure gauges, meters, the odolites etc. May make new instruments from blue prints.

Functional Tester; is responsible for checking functions of manufactured industrial equipment such as UPS, inverter, energy meter, PLC, oscilloscope, control panel. The individual at work tests specified functions of every product being assembled on the production line.

9. Mechanic Refrigeration & Air Conditioner [Duration: 2 years (4 semesters of six months each)] NSQF level-5:

Course Content:

In the first semester trainee learns about personal safety and machinery safety, manipulating tools, instruments and equipments in refrigeration workshop. The trainee can able to perform fitting and sheet metal works related to repair refrigeration and air conditioning equipments. The trainee can able to work in electrical area to measure current, voltage, resistance and able to connect star and delta connections. The trainee can able to check and rectify the electrical defects in refrigerators. He will be able to identify the electronic components in refrigerator and rectify the defects. The trainee can able to operate gas welding machines for brazing in refrigeration systems. The trainee shall be able to repair, maintenance, Install, servicing, trouble shooting, fault detection, leak testing and gas charging, diagnosis & remedial measures in Refrigerator (Direct cool), Frost free refrigerator and Inverter technology Refrigerator.

In the second semester the trainee shall be able to identify different compressor, dismantling and assembling compressors. The trainee shall be able to start the motor through DOL, Star Delta starter and changing DOR. The trainee shall be able to service condensers. The trainee shall be able to fix refrigerant controls and service evaporator. The trainee shall be able to Recover and Recharge of Refrigerant used in systems, transfer & handling of gas cylinders. The trainee shall be able to Retrofit CFC/HFC machine with ozone friendly refrigerant. The trainee shall be able to fix thermal insulation. The trainee shall be able to install window AC, test Electrical, electronic components, Fault diagnosis & remedial measures in window A.C. The trainee shall be able to Install, servicing, trouble shooting, fault detection, leak testing and gas charging in Split A.C (wall mounted), Split A.C (floor, ceiling /cassette mounted Split A.C), Split A.C (ducted), multi Split A.C and Inverter Split A.C. The trainee shall be able to Installation, servicing, trouble shooting, fault detection, leak testing and gas charging in Car Air Conditioner.

In the third semester the trainee learns about different commercial compressor and its dismantling, assembling, fault finding and rectification. The trainee shall be able to de-scaling in water cooled condensers, Evaporative condenser and Cooling tower. The trainee shall be able to Selection of Expansion valves and its installations. The trainee shall be able to Service air cooled evaporator and blower. The trainee shall be able to Install, service maintenance, trouble shooting, fault finding and rectification, leak testing, evacuation and gas charging, electrical circuit repairing in water cooler & water dispenser, visible cooler, bottle cooler, deep freezer / display cabinet, ice cube machine and softy machine . The trainee shall be able to Service, operate , test electrical controls, test leak, evacuation and gas charging , Periodic maintenance in Ice candy plant, Ice plant, walk in cooler & reach in cabinet and cold storage.

In the fourth semester the trainee learns about HVAC (study of psychrometry, blowers & fans, static and velocity pressure measurements.)The trainee shall be able to make duct designing, duct making, insulating in ducts. The trainee shall be able to clean and fix air filters. The trainee shall be able to identify various components, Leak testing, evacuation, gas charging, Commissioning and trouble shooting of package A.C

with air and water cooled condenser, split package. The trainee shall be able to trace electrical circuit, testing components, gas charging, Servicing AHU including fire dampers, Checking airflow, damper, temperature and pressure, operation, De-scaling condenser and cooling tower of central AC plant(Direct and Indirect). The trainee shall be able to Identify VRF / VRV system, Check and service of VRF / VRV system, Connect master unit and IDU, identify the location of ODU, identify the size of piping's and laying work, Check control system and identify error code. The trainee shall be able to service and maintain the mobile A.C (bus, train). The trainee also undergoes project work and Industrial visit/ In plant training at the end of each semester which gives them more practical exposure and helps to build up confidence level.

Skills Acquired:

Mechanic Refrigeration and Air Conditioner - Mechanic Refrigeration and Air Conditioner installs and repairs refrigeration or air conditioning plant by replacing or repairing defective parts, re-seating valves, refitting coils, insulating, requiring electrical connections, soldering etc. Installs at site assembled air conditioning unit and refrigerators giving necessary power connections and making changes to units as necessary to attain desired results. Examines faulty equipment to ascertain nature and location of defects. Dismantles equipment partly or completely according to nature of defects to remove damaged or worn out parts. Replaces or repairs defective parts. Replaces or repairs defective parts to units by re-seating valves, refitting coils, re-insulating system, etc. over hauls units and reassembles them after cleaning components and replacing defective or worn out parts of pumps, compressors, motors, etc., Removes faulty sealed units or sub-units of refrigerators or air conditioning plants and obtains replacements. Conducts vacuum and pressure test of pipe lines and charges system with fresh refrigerant. Sets plant to desired cooling conditions, prevents leakage and ensures attainment and maintenance of required temperature. Gets burnt out motors or generators repaired by Electrician or Electrical Winder and installs repaired ones to plant giving necessary electrical connections. May work in ice factory, cold storage plants, specialized air conditioning units or domestic refrigerators. Repair and service in refrigerator, water cooler, bottle cooler, deep freezer, Visi Cooler, Walk in Cooler, Ice candy plant, Cold storage, Ice plant, Split Air Conditioner, Package Air Conditioner, Central Air Conditioner, mobile Air Conditioner. Plan and organize assigned work and detect & resolve issues during execution in his own work area within defined limit. Demonstrate possible solutions and agree tasks within the team. Communicate with required clarity and understand technical English. Sensitive to environment, self-learning and productivity.

10. Electronics Mechanic [Duration: 2 years (4 semesters of six months each)] NSQF level-5: Course Content:

In first semester the trainee learns about safety and environment, use of fire extinguishers, artificial respiratory resuscitation to begin with. He gets the idea of trade tools & its standardization, Familiarize with basics of electricity, test the cable and measure the electrical parameter. Skilling practice on different types & combination of cells for operation and maintenance of batteries being done. Identify and test passive and active electronic components. Construct and test unregulated and regulated power supplies. Practice soldering and de-soldering of various types of electrical and electronic components on through hole PCBs. Assemble a computer system, install OS, Practice with MS office. Use the internet, browse, create mail IDs, download desired data from internet using search engines.

In second semester the candidate will be able to construct and test amplifier, oscillator and wave shaping circuits. Testing of power electronic components. Construct and test power control circuits. Identify and test opto electronic devices. Able to achieve the skill on SMD Soldering and De-soldering of discrete SMD components. Verifying the truth tables of various digital ICs by referring Data book. Practice circuit simulation software to simulate and test various circuits. Identify various types of LEDs, LED displays and interface them to a digital counter and test. Construct and test various circuits using linear ICs 741 & 555.

In third semester the trainee will be able to operate DSO and perform various functions. Gaining the skill by practicing SMD Soldering and De-soldering of various types of IC Packages. Able to identify the defects and do rework of PCB. Construct and test simple electrical control circuits and various electrical protective devices. Identify, prepare, terminate and test various types of electronic cables used in various electronic systems. Identify various functional blocks and I/O Ports of a 8051 microcontroller system, Familiarize with the instruction set of 8051 micro controller. Interface a model application with the Microcontroller kit and run the application. Construct and test various modulation/demodulation circuits. The trainee will identify and test various types of sensors used in electronic industries and construct and test circuits using various sensors system. They can construct and test analog and digital IC based application circuits as a part of project work.

In fourth semester the trainee will work with DPM Modules to measure various electrical parameter, Also interface the LCD modules to display a word. They will also skilled with various modulation techniques to acquaint with fibre optic communication techniques by using trainer kit. Identify various functional blocks/major components/ICs in the given stabilizer, rectify the faults. Identify various Input and output sockets/connectors of the given SMPS and UPS. Install and troubleshoot the given solar panel system.

Dismantle and assemble various types of cell / smart phones and trouble shoot the cell/smart phone. Dismantle and assemble the given LED light stack. Design a LED light for the given ratings. Assemble decorative lighting system (serial lights) using LED strips. Dismantle, assemble, trouble shoot and rectify LED and LCD TV sets.

Skills Acquired:

Electronics Fitter, General fits, assembles and repairs various kinds of electronic equipment in factory or workshop or at place of use. Examines drawings and wiring diagrams; checks parts for accuracy of fit and minor adjustments; assembles parts or mounts them on chassis or panels with aid of hand tools; installs and connects wiring, soldering joints equipment, diagnoses faults with aid of electronic testing equipment; dismantles equipment if required and replaces faulty parts or wiring. **Electronics Fitter, other** include all other workers engaged in fitting, assembling, repairing and maintaining electronic equipment, machinery, appliances, etc., not elsewhere classified. **Electronics Mechanic;** Electronic Equipment Mechanic repairs electronic equipment, such as computers, industrial controls, transmitters, and telemetering control systems following blueprints and manufacturer's specifications and using hand tools and test instruments. Tests faulty equipment and applies knowledge of functional operation of electronic units and systems to diagnose cause of malfunction. Tests electronic components and circuits to locate defects, using instruments, such as oscilloscopes, signal generators, ammeters and voltmeters. Replaces defective components and wiring and adjusts mechanical parts, using hand tools and soldering iron. Aligns, adjusts and calibrates testing instruments. Maintains records of repairs, calibrations and test.

Radio Technician (Radio Manufacturing) tests assembled radio sets with testing equipment to ensure that assembly soldering, frequency, performance, etc. are in accordance with prescribed standards. Places assembled radio set in position and visually examines it to ensure that position of components, connections, soldering, wiring, etc. are in order. Switches on and operates different knobs to check calibration, audibility and general performance of set by varying its tone and listening to various stations and frequencies. Tightens loose nuts and screws, locates faults, replaces defective components and conducts necessary changes. Approves correctly assembled sets for further processing and rejects defective ones for rectification. May tests sets at different stages of assembly. May service, repair and overhaul radio sets.

Solar Panel Installation Technician is also known as 'Panel Installer', the Solar Panel Installation Technician is responsible for installing solar panels at the customers' premises. The individual at work checks the installation site, understands the layout requirement as per design, assesses precautionary measures to be taken, installs the solar panel as per customer's requirement and ensures effective functioning of the system post installation.

Optical fibre technician is responsible for maintaining uptime and quality of the network segment (both optical media and equipment) assigned to him by undertaking periodic preventive maintenance activities and ensuring effective fault management in case of fault occurrence. He is also required to coordinate activities for installation and commissioning of Optical Fibre Cable (OF) as per the route plan.

Field Technician: UPS and Inverter is also called, 'UPS repair Technician', this is an after sales service job for installing and providing support to customers of different types of UPS and inverters. The individual at work installs the newly purchased UPS or inverter. The individual also and interacts with customers to diagnose problems in them, assesses possible causes, rectifies faults or replaces faulty modules or recommends factory repairs for bigger faults as per the route plan. Installation, service, repair and overhaul radio sets service centre. May install television sets.

Television Installation Man installs and adjusts television receivers and antennas, using hand tools. Selects antenna according to type of set and location of transmitting station. Bolts cross arms and dipole elements in position to assemble antenna. Secures antenna in place with bracket and guy wires, observing insurance codes and local ordinances to protect installation from lightning and other hazards. Drills and waterproofs holes in building to make passage for transmission line. Connects line between receiver and antenna and fastens it in place. Tunes receiver on all channels and adjusts screws to obtain desired density, linearity, focus and size of picture. Orients antenna and installs reflector to obtain strongest possible reception.

Cable Television Installer installs cable television cables and equipment on customer's premises, using electrician's tools and test equipment: Measures television signal strength at utility pole, using electronic test equipment. Computes impedance of wire from pole to house to determine additional resistance needed for reducing signal to desired level. Installs terminal boxes and strings lead-in wires, using electrician's tools. Connects television set to cable system and evaluates incoming signal. Adjusts and repairs cable system to ensure optimum reception. May collect installation fees and explain cable service operation to subscriber. May clean and maintain tools, test equipment.

Television Service and Repairman repairs and adjusts radios and television receivers, using hand tools and electronic testing instruments. Tunes receiver on all channels and observes audio and video characteristics to locate source of trouble. Adjusts controls to obtain desired density, linearity, focus and size of picture. Examines chassis for defects. Tests voltages and resistance of circuits to isolate defect following schematic

diagram and using voltmeter, oscilloscope, signal generator and other electronic testing instruments. Tests and changes tubes, solders loose connections and repairs or replaces defective parts, using hand tools and soldering iron. Repair radios and other audio equipment. **Television Repair Technician** job role is applicable to both Television manufacturing facilities as well as electronics service centres. This role pertains to rectify faults identified during testing of TV on in manufacturing process and providing after sales assistance and ensuring appropriate functioning of television sets. A TV repair technician identifies the section in the TV that is not functioning. If the problem identified is in the Printed Circuit Board (PCB), the technician identifies the specific fault in the PCB and corrects it. Replaces the dysfunctional PCB with a new one, if the damage identified requires fixing at the service centre. Plan and organize assigned work and detect & resolve issues during execution. Demonstrate possible solutions and agree tasks within the team. Communicate with required clarity and understand technical English. Sensitive to environment, self-learning and productivity.

11. Draughtsman (Mechanical) [Duration: 2 years (4 semesters of six months each)] NSQF level-5:

Course Contents:

In First semester includes construction of geometrical figures using drawing instruments, freehand drawing of machine components in correct proportions, procedure to prepare a drawing sheet as per BIS standard. After becoming familiar with basic drafting terminology, students begin to develop multi-view drawings and learning about projection methods, auxiliary views and section views. Lettering, tolerance, metric construction, technical sketching and orthographic projection, isometric drawing, oblique and perspective projection are also covered.

In second semester introduces drawing of different fasteners, welds, and locking devices as per specification mentioned in SP-46:2003 and use of CAD technology in 2D environment. The candidate also imparted training on allied trades viz. Fitter, Turner, Machinist, Sheet Metal Worker, Welder, Foundryman, Electrician and Maintenance Motor Vehicles. The safety aspects covers components like OSH&E, PPE, Fire extinguisher, First Aid and in addition 5S being taught.

In third semester, to develop skill in CAD application practical assignments are given by using commands in various methods. Detail and assembly drawing of machine parts viz., Pulleys, Pipe fittings, Gears and Cams applying range of cognitive and practical skills. Construct production drawing applying quality concept in CAD. Creation of objects in 3D Modeling Space and generate views, print preview to plot in .dwg and .pdf format.

In fourth semester, – Individual skill is developed by preparing production drawing of machine parts applying conventional sign and symbol by taking measurement. Impart knowledge to draw workshop layout of a production industry considering process path and human ergonomics. In Solid Works/AutoCAD Inventor/ 3D modeling environment the assignment is to create and plot assembly and detailed views of machine parts with dimensions, annotations, title block and bill of materials.

Skills Acquired:

Draughtsman Mechanical; prepares drawings of machines, plants, mechanical components, equipments etc. from sketches, notes, data or sample for purposes of manufacture or repairs. Takes instructions from **Mechanical Engineer** and calculates dimensions as required, from available materials (notes, data etc.) or sample. Draws to scale detailed drawings, assembly drawings, showing plan, elevations, sectional views etc. according to nature of work and operations required. Prints (writes) dimensions, tolerances, material to be used and other details to give clear picture and facilitate understanding. Maintains copies of drawings and makes prints. They may trace drawings and may design simple mechanical parts. May prepare estimates for materials and labour required. May specialize in making drawings of jigs and tools and be designated accordingly. Create component parts on Drawing Space using toolbars, commands and menus in CAD application software and also creating objects on 3D modeling space in CAD viewing printable drawing and plotting them. Draughtsman Mechanical selects the appropriate equipment and drawing software to use based on the type and complexity of the drawing functions to be carried out and the use of a CAD system linked bills of material, file management and associated customization of installed software including the use of macros, menus and default settings. In addition, Draughtsman Mechanical has the ability to visualize the job, good coordination, mechanical attitude, manual dexterity and perform work related mathematical calculations. Plan and organize assigned work and detect & resolve issues during execution. Demonstrate possible solutions and agree tasks within the team. Communicate with required clarity and understand technical English. Sensitive to environment, self-learning and productivity.

12. Draughtsman (Civil) [Duration: 2 years (4 semesters of six months each)] NSQF level-5

Course Contents :

In first Semester - The practical part starts with basic drawing (consisting geometrical figure, symbols & representations). Later the drawing skills imparted are drawing of different scales, projections, drawing of shoring, scaffolding, stone and brick masonry, foundation, damp proofing, arches / lintel etc. and

observation of all safety aspects is mandatory. The safety aspects covers components like OSH&E, PPE, Fire extinguisher, First Aid and in addition 5S being taught.

In second Semester - Different site survey (using Chain & tape, Prismatic compass, Plane table, Levelling instrument, Theodolite), field book entry, plotting, mapping, calculation of area, Drawing of carpentry joints and Electrical wiring, drawing of floors, slabs, vertical movements (viz. stair, lift well, ramp and escalator), drawing of different types of roof truss are being taught in the practical.

In third Semester - Single storied building plan in traditional drawing. Knowledge and application of Computer Aided Drafting, Workspace creating drawing using toolbars, commands, and menus. Plotting drawing from CAD. 2D drafting of Doors, Windows, hand railing, wash basin, and plumbing joints. Preparing library folders by creating blocks of regularly used items. Preparation of a sanction plan of double storied RCC flat roof residential building using CAD. Preparation of a drawing of public building by framed structure using CAD. Preparation of Bar bending schedule. Drawing of different steel structure joints using CAD. Detail drawing of sanitary fittings and sewerage arrangements using CAD.

In fourth Semester, detail and sectional drawing of Roads, Bridges, culverts, railway tracks and embankment, Dams, Barrages, Weir and cross drainage works using CAD, schematic diagram of hydro electric project using CAD, Estimating and Cost analysis of different types of buildings and structures, preparation of map using Total Station and location of station point using GPS are being performed as part of practical training.

Skills Acquired:

Draughtsperson-Civil; prepares drawings of buildings, stores, high ways, dams, culverts, etc. from sketches, notes or data for purposes of construction or alternations. Takes instructions from Civil Engineer studies sketches and calculates dimensions from notes or data. Draws to given scale different elevations, plan, sectional views etc. of desired construction using drawing instruments. Draws detailed drawings of specific portions as required. Indicates types of materials to be used, artistic and structural features, etc. in drawing as necessary. May do tracing and blue printing. May reduce or enlarge drawings. May prepare or check estimate schedules for cost of materials and labour. May prepare tender schedules and draft agreements. May work as Draughtsman Architectural.

Draught person, Structural; prepares drawings of bridges, steel structures, roof tresses etc. From sketches, designs or data for purposes of construction, alteration or repairs. Studies sketches, data, notes etc. and receives instructions from Structural or Mechanical Engineers regarding details and types of drawings to be made. Calculates dimensions as necessary from available notes, data etc. and by application of standard formulae. Draws to scale detail, assembly and arrangement drawings showing sectional plan and other views as directed and prints (writes) necessary instructions regarding materials to be used, limits, assembly etc. to clearly indicate all aspects of structure to be manufactured. May prepare estimate and operation schedules for labour and material costs. May prepare tender schedule and draft agreements. May prepare tables showing requirements of bars, their numbers, sizes and shapes. May trace and make blue prints.

Draughtsperson, Topographical; Sketches topographical drawings to scale in different colours using blue print prepared from field plane tables. Carries out independently projection of small scale map to predetermined size, incorporating features covered in survey, producing total geographical effect by hill shading, giving contours, profile, cross sections, authorised symbols, etc. Uses grid tables, projection table compasses, pantograph, planimeter, etc.

13. Secretarial Practice(English)[Duration: 1 year (2 semesters of six months each)] NSQF level-4

Course Content:

In first semester the trainee learns about safety and environment, use of Secretarial Practice English, artificial respiratory resuscitation to begin with. He gets the idea of about the basic computer fundamentals & its peripherals, classify the consonants & its direction / joining the consonants, distinguish between long & short vowels, Describe Logograms, Grammalogues Contraction & use of 'the' /punctuation mark. Understand Diphthong, Prepare Windows operating system on computer, Compare all types of alternative forms & recognize the finger positioning on the computer keyboard, Compare all types of alternative forms & recognize the finger positioning on the computer keyboard, Recognize the direction of SHR & SHL, Observed curved hooked strokes and compound consonant, Recognize Final Hooks, Recognize Final Hooks, application of the prefixes and suffixes, Identify the monetary units & use it, Identify the monetary units & use it. In this semester trainees able to write in shorthand, translation, note taking techniques and apply on computer for speed typing in MS-Word.

In second semester the trainee will be able work with MS-Excel by manipulating datas, maintain office stationeries, maintain simple accounts with formulas and functions, Label the office layout, Name the dispatch and diary register & maintain computer data safety , Identify all types of file requirements & implement the same on MS-Power point, Demonstrate MS-PowerPoint Presentation, searching of information with internet browser, Create E-Mail ID, correspondence through mail, filling up online forms and documents for registration etc., booking tickets for rail, bus, air and hotels, Identify all types of official tools & equipments, Observe all types of postal services, Prepare all types of letters, notice, agenda, minutes,

reports, circular & memorandum. Trainees will able to maintain calendar of event and general Banking Correspondence.

Skills Acquired:

Perform routine clerical and administrative functions such as drafting correspondence, scheduling appointments, organizing and maintaining paper and electronic files, or providing information to callers. Following are the job roles for a Secretarial Practice (English): Answer telephones and give information to callers, take messages, or transfer calls to appropriate individuals. Arrange conferences, meetings, and travel reservations for office personnel. Complete forms in accordance with company procedures. Compose, type, and distribute meeting notes, routine correspondence, and reports. Greet visitors and callers, handle their inquiries, and direct them to the appropriate persons according to their needs. Locate and attach appropriate files to incoming correspondence requiring replies. Mail newsletters, promotional material, and other information. Maintain scheduling and event calendars. Make copies of correspondence and other printed material. Open, read, route, and distribute incoming mail and other material, and prepare answers to routine letters. Schedule and confirm appointments for clients, customers, or supervisors. Set up and maintain paper and electronic filing systems for records, correspondence, and other material. Take dictation in shorthand or by machine, and transcribe information. Keep records of collections and disbursements. Conduct searches to find needed information, using such sources as the Internet. Coordinate conferences and meetings. Learn to operate new office technologies as they are developed and implemented. Manage projects, and contribute to committee and team work. Operate electronic mail systems and coordinate the flow of information both internally and with other organizations. Prepare and mail checks. Provide services to customers, such as order placement and account information. Review work done by others to check for correct spelling and grammar, ensure that company format policies are followed, and recommend revisions. Operate office equipment such as fax machines, copiers, and phone systems, and use computers for spreadsheet, word processing, database management, and other applications.

14. Stenographer & Secretarial Assistant (English) [Duration: 1 year (2 semesters of six months each)]NSQF level-4:

Course Content:

In first semester the trainee learns about safety and environment, use of Stenographer Secretarial Assistant English, artificial respiratory resuscitation to begin with. He gets the idea about the computer hardware & its peripherals, CLASSIFY THE CONSONANTS & ITS DIRECTION /JOINING THE CONSONANTS, Distinguish between long & short vowels, Describe Logograms, Grammatologies Contraction & use of 'the' /punctuation mark. Understand Diphthong, Prepare Windows operating system on computer, Compare all types of alternative forms & recognize the finger positioning on the computer keyboard, Compare all types of alternative forms & recognize the finger positioning on the computer keyboard, Recognize the direction of SHR & SHL, Observed curved hooked strokes and compound consonant, Recognize Final Hooks, Recognize Final Hooks, List the prefixes, List the suffixes, Identify the monetary units & use it. This semester also includes shorthand, translation, and note taking techniques and applies on computer for speed typing in MS-Word.

In second semester the trainee will be able to experiment the MS-Excel, Label the office layout, Name the dispatch and diary register & maintain computer from virus effect, Identify all types of file & prepare MS-Power point, Demonstrate MS-PowerPoint Presentation, Create E-Mail ID, correspondence through mail, filling up online forms and documents for registration etc., booking tickets for rail, bus, air and hotels, Identify all types of official tools & equipments, Observe all types of postal services, Prepare all types of letters, notice, agenda, minutes, reports, circular & memorandum. Trainees will able to maintain calendar of event and general Banking Correspondence.

Skills Acquired:

Stenographer Secretarial Assistant (English) takes dictation in shorthand and reproduces it on paper using computer and performs various other clerical duties to assist superiors. Maintain a good mannerism and professional approach with the boss. Following are the job roles for a Stenographer Secretarial Assistant (English): Correspond through emails, phone and faxes. Maintaining and updating filing systems. Coordinating with department heads to ensure smooth working of the organization. Handling day-to-day administrative duties of the organization. Making arrangement for meetings, conference and seminars. Handling various activities within and outside the organization. Taking dictation in shorthand and operating typewriter for transcribing dictated materials. Handled and maintained correspondence files and other official documents. Made travel bookings for domestic and international services. Drafted business letters in clear and precise manner for easy understanding. Coordinated business meetings and wrote minutes of meetings in shorthand. Handled confidential information of the organization. Prepared reports and documents for inter-department. Handled day-to-day activities of the organization. Prepared various presentations for the management team .

15. Mechanic Motor Vehicle [Duration: 2 years (4 semesters of six months each)] NSQF level-5:**Course Content:**

First Year will cover the safety aspect in general and specific to the trade, identification of tools & equipment, raw materials used. The trainee will perform Measuring & marking by using various Measuring & Marking tools. The trainee will be able to plan and perform basic fastening and fitting operations. Familiarize with basics of electricity, test and measure the electrical parameter. Skilling practice on maintenance of batteries being done. Practice making various welding joints by using Arc and gas welding. Trace and identify various hydraulics and pneumatics components and identify components in Air and Hydraulic Brake system. Identify various types of vehicle. The candidate will be able to perform practice on dismantling Diesel Engine of LMV as per given standard procedures. Able to achieve skill on Overhauling of Cylinder Head, valve train, Piston, connecting rod assembly, crankshaft, flywheel and mounting flanges, spigot and bearings, camshaft etc. practice reassembling all parts of engine in correct sequence as per workshop manual. Perform testing on engine. Also the trainee practice on repair and maintenance of Cooling, lubrication, Intake & Exhaust system of Engine. Perform maintenance of diesel fuel system, FIP, Governor and monitor emission of vehicle. Practice on repair, maintenance and overhaul of Starter, alternator and perform Execute troubleshooting in engine of LMV/HMV.

In the second year, the trainee will learn to perform overhauling of lightvehicle/Heavy Vehicle transmission units including Gear box, Single plate clutchassembly, Diaphragm clutch assembly, onstant mesh Gear box, synchromesh gearbox, gear linkages, Propeller shaft, Universal Slip Joint, Rear axle assembly, Differential assembly. The trainee will perform overhauling of light vehicle Chassis units, adhering to the specifications and tolerances for the vehicle and the manufacturer's approved overhauling methods, Standard repair methods, health and safety requirements etc.the trainee will learn how to overhaul, repair and service Shackle, Leaf spring, Frontaxle, Front and rear suspension, Steering Gearbox- worm and roller type, SteeringGearbox- Reticulating ball type, Master cylinder, Tandem Master cylinder, Front and rear brake, Wheel cylinder, Vacuum booster, Air servo unit, Air tank (reservoir) etc.

The trainee will also learn to carry out wheel balancing and Wheel Alignment to within acceptable limits. The trainee will troubleshoot vehicle Engine components and ascertain repair. Plan & service Electronic Control Unit and check functionality. Diagnose & rectify the defects in vehicle to ensure functionality of vehicle. The trainees will carry out overhauling of charging system. Also the trainee will perform overhauling of starting system. Troubleshoot electrical components of vehicle and ascertain repair. Overhaul, service and testing Vehicle Air Conditioning system, its parts and check functionality. The trainee will also learn to drive vehicle following Traffic Regulations and maintenance of good road conduct.

Skills Acquired:

Mechanic Motor Vehicle; repairs overhauls and services motor vehicles to keep them in good running condition. Examines vehicle to ascertain nature and location of defects either by running engine or driving vehicle on road. Dismantles partially or completely defective unit or parts of vehicle such as engine, gear box, rear axle, front axle, steering assembly, radiator, etc. according to nature of repairs to be done, using hoist, jack, pullers, hand tools and other devices. Measures essential parts like cylinder, bores piston, sizes crank pins etc. using gauges, micrometer and other precision tools and gets cylinders rebored, liners filled, valve seats refaced, bearings replaced etc. as necessary. Repairs or overhauls and assembles engine such as replacing defective parts, scrapping bearings, setting timing, cleaning injectors, tuning carburetor, MPFI and CRDI Engines etc. according to maker's specification. Replaces or repairs defective parts of gear box, rear axle, steering mechanism etc. and sets them right ensuring correct alignment, clearance, meshing of gears, specified movements and operations. Relines and builds brakes, sets wheel alignment, adjust, steering, clutch, hand brakes etc fits new or repaired accessories and body parts, makes electrical connection, and performs other tasks to effect repairs. Lubricates joints, tightens loose parts, tests performance of vehicle by driving on road and makes necessary adjustments to attain desired standard. Troubleshooting and rectification of engine, chassis, and auxiliary system. State the importance of Motor vehicle act and rules Plan and organize assigned work and detect & resolve issues during execution. Demonstrate possible solutions and agree tasks within the team. Communicate with required clarity and understand technical English. Sensitive to environment, self-learning and productivity.

16. Basic Cosmetology [Duration: 1 year (2 semesters of six months each)] NSQF level-4:**Course Content:**

Recognize & comply safe working practices, environment regulation and housekeeping. Work in a team, understand and practice soft skills, technical English to communicate with required clarity. Identify and develop specific area to perform practical operations. Explain energy conservation, global warming and pollution and contribute in day to day work by optimally using available resources. Explain personnel finance, entrepreneurship and manage/organize related task in day to day work for personal & societal growth. Explain and apply basic computer working, basic operating system, simulate part programme using simulation software and uses internet services to get accustomed & take benefit of IT developments in the

industry. Understand and explain the concept in productivity, quality tools, and labour welfare legislation and apply such in day to day work to improve productivity & quality. Explain occupational safety and health, hygiene, accident prevention techniques and first aid . Develop good appearance and behavior, practice, tasks as per industry standard and express good communication skill. Prepare and maintain work area and maintain health and safety at the work place. Carry out epilation and depilation services. Illustrate and explain hair structure & hair growth cycle. Carry out manicure and pedicure services. Explain anatomy of nail. Differentiate between and identify nail disease nail disorders. Carry out facial treatments for common skin problems. Illustrate and explain skin structure. Carry out hair treatment for common hair problems. Illustrate and explain structure of hair. Create basic haircuts using special cutting techniques. Demonstrate basic yogic exercises for stamina building and correcting body posture Demonstrate day, evening, party & bridal makeup and explain effects of light on makeup. Demonstrate basic corrective makeup & explain basic facial shapes. Create traditional hair styles using artificial aids. Create hair designs using thermal gadgets and wet styling techniques. Demonstrate hair coloring, perming, straightening, rebonding & smoothing. Explain the knowledge of bonds. Create bindi, heena & tattoo designing, drape saree in different styles. Demonstrate asanas for spine stretching, stress management & common body ailments.

Skills acquired: A Cosmetologist job role provides various types of beauty services, aware of the Beauty therapy, Health and hygiene, Safety & needs to be knowledgeable about beauty products. They must able to perform Basic Epilation, Manicure, Pedicure, Facial treatments, Haircuts, Hair Styles, Hair Coloring, Straightening, Rebinding & Hair treatments. They are also able to demonstrate different types of makeup & basic corrective makeup. A cosmetologist must be able to perform and demonstrate Yoga asana & Meditation in order to remain fit & active for long working hours as they have to work under pressure, be polite & patient. & recommend the asana to clients having common ailments. Demonstrate the operation of Beauty & Hair Equipments. Plan and organize assigned work and detect & resolve issues during execution. Demonstrate possible solutions and agree tasks within the team. Communicate with required clarity and understand technical English. Sensitive to environment, self-learning and productivity.

17. Food Production (General) [Duration: 1 year (2 semesters of six months each)] NSQF level-4:

In the first semester, the trainee learns about elementary first-aid, firefighting, environment regulation and housekeeping, etc. The trainee identifies trade tools, kitchen equipment and kitchen operation process. He understands the importance of personal hygiene, cleanliness of kitchen/ cooking utensils, food handling and hygiene protective clothing. He practices safe handling of kitchen knives and other hand tools. He identifies basic ingredients, spices, condiments, herbs, pulses, vegetables, fruits, continental vegetables and various meat products, etc. The trainee understands and practices various cuts of vegetables viz. Julienne, jardinière, brunoise, and passion cuts, etc. The trainee learns preparing mise en place and practices various cooking methods viz. Blanching, sautéing, steaming, stewing, roasting, grilling, braising, baking, etc. He prepares and practices basic Indian foods like dal, vegetables, chutney, raita, Indian bread etc. The trainee learns to prepare ala carte menu for breakfast/ buffet. In the second semester, the trainee learns to prepare, season and cook soup, meats, vegetable and other food stuff. He learns to make varieties of exotic Indian foods based on regional cuisine/ ethnic royal cuisine and various continental/ Chinese food. The trainee learns to work in the Garde manger and prepares various salads, salad dressings, sandwiches, canapés, fruit juice and other cold foods, etc. The trainee learns to work in a bakery and prepares various desserts and sweet dishes viz. breads/ bread rolls, soup sticks, pastries, jam tort, swiss roll, puff, patties, cookies and cakes, etc. The trainee learns to cook varieties of Indian and continental chicken and meat recipes. It is also demonstrated to the trainee via presentation about the activities which are not feasible to be practiced at the Institute viz. non-seasonal ingredients, various cuts; lamb, beef, mutton, pork and game bird, etc. The trainee also undergoes four weeks on-the-job training in various hotel industries at the end of the second semester which gives them more practical exposure to industrial environment.

Skills acquired:

Cook, Institutional; prepares, seasons and cooks soups, meats, vegetables, desserts and other foodstuff for consumption in hotels, restaurants and other establishments. Fries, boils, broils, roasts or steams vegetables, meats, fish and other food to prepare dishes listed on menu and prepare salads, sandwiches, cakes, fruit juices and other cold foods. Supervises dish washing and preparing of vegetables and other foodstuff for cooking. May specialize in preparing a particular cuisine such as Indian/Chinese/Continental or specialize in Garde manger/bakery and be designated accordingly. **Cook, Domestic;** prepares and cooks meals in private households. Plans menu according to own judgment or employer's instructions and prepares soup, salad, breads, lentil, vegetables and meats. Cooks foodstuff according to recipes or own judgment. Cleans or supervises cleaning of kitchen and cooking utensils. May serve meals, perform duties of valet and be designated as COOK-BEARER. **Cook, Ship** Cook, Ship on board ship. Plans menu taking account of foods in season and local availability. Cooks food stuffs in quantities according to menu and number of persons to be served. Cleans, cuts and cooks meat, fish and poultry and bakes breads and pastry. Washes dishes and cleans

galley and galley equipment. May order supplies and maintain record and accounts. May supervise activities of one or more workers who assist in preparing and serving, meals.

Cooks, Other; prepare special food or dishes in private households or public eating places and include cooks not elsewhere classified, such as SWEET MASTER plans and prepares general and special sweet dishes, in hotels, restaurants and other such establishments. DIET COOK prepares special diets for people under medical restriction. TEA AND COFFEE MAKER brews and prepares beverages like coffee and tea in hotels, clubs or similar establishments and ensures proper cleanliness of stall.

18. Food and Beverages Services Assistant [Duration: 1 year (2 semesters of six months each)] NSQF Level 4

Course Content In the first semester, the trainee learns about elementary first-aid, firefighting, environment regulation and housekeeping, etc. The trainee identifies trade tools, kitchen equipment and kitchen operation process. He understands the importance of personal hygiene, cleanliness of kitchen/ cooking utensils, food handling and hygiene protective clothing. He/she practices safe handling of cutlery/crockery/glassware. The trainee can Carry and balance food/ beverages/equipments on a tray. Adopt methods and techniques of different styles of service –American/ French/ English/ India. Carry out room service operations. The trainee can Arrange & set up tray for room service for American/ English/ Continental/ Indian breakfast and breakfast layout in coffee. He can Arrange & set up cover for a la carte and table d’hote menu. He/she learns to receive the guest, seating at the table and serving water, present the menu, take order, raise KOT, BOT, food pick up service and service of food. In the second semester, the trainee learns to Serve non-alcoholic Beverages like Tea, Coffee, Aerated Drinks, Milk shakes, Juices, Tisanes etc. Serve Alcoholic Beverages like Red wine, White wine, Sparkling wines etc Serve fermented beverages, Beer etc Serve Spirits like Vodka/ Rum/ Whisky/ Brandy/ Tequila etc Prepare, serve and dispense mocktails, whisky based cocktails, Gin based Cocktails, Vodka based cocktails & Rum based cocktails. Serve Cigars, cigarettes and change the ash tray. Serve cheese etc Serve salads, Ice creams and Soups. Design the layout of restaurant. Separate the activities and maintain log books, records, Proformas.

Skills Acquired:

Steward, Hotel; supervises work of Dining Room Waiters Pantry Man and Room Service Waiter and ensures that guests are served promptly and courteously in dining room. Receives customers in dining hall and escorts them to tables and obtains orders from customers and ensures that food is served promptly by Waiters. Visits rooms, halls and other areas to ensure that they are kept clean and tidy. Ensures that glass, china and silver wares are in good order. Prepares dining halls for banquets and special occasions by decorating them with flower vases and arranging tables and chairs in pleasing fashions. Keeps record of any breakage of crockery or loss of cutlery. May keep kitchen equipment, crockery, cutlery etc., under his charge and issue them as needed. May purchase food supplies and kitchen equipment and check them for quality and quantity. May supervise storage and issue of supplies.

Waiter, Institutional/Food and Beverage Service-Steward; Bearer (Institutional) serves food, snacks, beverages to customers, guests in hotels, bars, and restaurants. Prepares table with clean linen, condiments containers, glasses, menu-card and obtains orders from customers. Collects food, beverages, snacks etc., from kitchen according to customers’ orders from Pantry Man and serves them. Waits on customers periodically for additional requirements, of food etc. Removes used plates, cups, saucers from table and presents bill to customers and collects cash and hands it to Cashier. Is designated as WAITER (dining room) if employed in serving food in dining rooms and LOUNGE WAITER if engaged for serving beverages and snacks in lounge.

19. Mechanic Diesel [Duration: 1 year (2 semesters of six months each)] NSQF level-4:

Course Content:

In first semester will cover the safety aspect in general and specific to the trade, identification of tools & equipment, raw materials used. In this semester the trainee will perform Measuring & marking by using various Measuring & Marking tools. The trainee will be able to plan and perform basic fastening and fitting operations. Familiarize with basics of electricity, test and measure the electrical parameter. Skilling practice on maintenance of batteries being done. Practice making various welding joints by using Arc and gas welding. Trace and identify various hydraulics and pneumatics components and identify components in Air and Hydraulic Brake system. Identify various types of vehicle.

In second semester the candidate will be able to perform practice on dismantling Diesel Engine of LMV as per given standard procedures. Able to achieve skill on Overhauling of Cylinder Head, valve train, Piston, connecting rod assembly, crankshaft, flywheel and mounting flanges, spigot and bearings, camshaft etc. practice reassembling all parts of engine in correct sequence as per workshop manual. Perform testing on engine. Also, the trainee practice on repair and maintenance of Cooling, lubrication, Intake & Exhaust system of Engine. Perform maintenance of diesel fuel system, FIP, Governor and monitor emission of vehicle.

Practice on repair, maintenance and overhaul of Starter, alternator and perform Execute troubleshooting in engine of LMV/HMV.

Skills acquired:

Mechanic Diesel can learn about diesel engine fundamentals and power generation. The trainees have to participate in hands-on work and begin repairing diesel engine vehicles. Mechanic, Diesel Engine; Oil Engine, Fitter repairs services and overhauls diesel or oil engines for efficient performance as prime mover to drive machinery and equipment. Examine engine to locate defects, using various tools and instruments. Dismantles or partly dismantles it to remove damaged or worn out parts and replaces or repairs them. Grinds valve and assembles parts, doing supplementary tooling and other functions as necessary to ensure accuracy of fit. Installs assembled or repaired engine in position and connects pulley or wheel to propulsion system. Starts engine, tunes it up and observes performance noting different meter readings such as temperature, fuel level, oil pressure, etc. and sets it to specified standard for optimum performance. Checks, adjusts and lubricates engine periodically and performs such other functions to keep engine in good working order. May solder or braze parts and service diesel fuel pumps and injectors. Additionally, since diesel engines are starting to incorporate electronic components, programs usually give students a chance to take courses in electrical systems and computer diagnostic software. Plan and organize assigned work and detect & resolve issues during execution in his own work area within defined limit. Demonstrate possible solutions and agree tasks within the team. Communicate with required clarity and understand technical English. Sensitive to environment, self-learning and productivity.

20. Welder [Duration: 1 year (2 semesters of six months each)] NSQF level-4:

Course Content:

Recognize & comply safe working practices, environment regulation and housekeeping. Understand and explain different mathematical calculation & science in the field of study including basic electrical. [Different mathematical calculation & science -Work, Power & Energy, Algebra, Geometry & Mensuration, Trigonometry, Heat & Temperature, elasticity. Interpret specifications, different engineering drawing and apply for different application in the field of work. [Different engineering drawing-Geometrical construction, Dimensioning, Layout, Method of representation, Symbol, Different Projections, Assembly drawing, Sectional views, Estimation of material]. Select and measure dimension of components and record data. Explain the concept in productivity, quality tools, and labour welfare legislation and apply such in day to day work to improve productivity & quality. Explain energy conservation, global warming and pollution and contribute in day to day work by optimally using available resources. Explain personnel finance, entrepreneurship and manage/organize related task in day to day work for personal & societal growth. Plan and execute the work related to the occupation.

Set the gas welding plant and join MS sheet in different position. [*Different position: -1F, 2F, 3F, 1G, 2G, 3G.*] Set the SMAW machine and perform different type of joints on MS in different position observing standard procedure. [*different types of joints- Fillet (T-joint, lap & Corner), Butt (Square & V); different position - 1F, 2F, 3F, 4F, 1G, 2G, 3G, 4G.*] Set the oxy- acetylene cutting plant and perform different cutting operations on MS plate. [*Different cutting operation – Straight, Bevel, circular*] Perform welding in different types of MS pipe joints by Gas welding (OAW). [*Different types of MS pipe joints – Butt, Elbow, T-joint, angle (45°) joint, flange joint*]. Set the SMAW machine and perform welding in different types of MS pipe joints by SMAW. [*Different types of MS pipe joints – Butt, Elbow, T-joint, angle (45°) joint, flange joint*]. Choose appropriate welding process and perform joining of different types of metals and check its correctness. [*appropriate welding process – OAW, SMAW; Different metal – SS, CI, Brass, Aluminium*] Demonstrate arc gouging operation to rectify the weld joints. Test welded joints by different methods of testing. [*different methods of testing- Dye penetration test, Magnetic particle test, Nick break test, Free band test, Fillet fracture test*] Set GMAW machine and perform welding in different types of joints on MS sheet/plate by GMAW in various positions by dip mode of metal transfer. [*different types of joints Fillet (T-joint, lap, Corner), Butt (Square & V); various positions- 1F, 2F, 3F, 4F, 1G, 2G, 3G*] Set the GTAW machine and perform welding by GTAW in different types of joints on different metals in different position and check correctness of the weld. [*different types of joints- Fillet (T-joint, lap, Corner), Butt (Square & V) ; different metals- Aluminium, Stainless Steel; different position- 1F & 1G*]. Perform Aluminium & MS pipe joint by GTAW in flat position. Set the Plasma Arc cutting machine and cut ferrous & non-ferrous metals. Set the resistance spot welding machine and join MS & SS sheet. Perform joining of different similar and dissimilar metals by brazing operation as per standard procedure. [*different similar and dissimilar metals- Copper, MS, SS*]. Repair Cast Iron machine parts by selecting appropriate welding process. [*Appropriate welding process- OAW, SMAW*]. Hard facing of alloy steel components / MS rod by using hard facing electrode.

Skills acquired: Welder while doing gas welding, fuses metal parts together using welding rod and oxygen acetylene flame. Examines parts to be welded, cleans portion to be joined, holds them together by some suitable device and if necessary makes narrow groove to direct flow of molten metal to strengthen joint.

Selects correct type and size of welding rod, nozzle etc. and tests welding, torch. Wears dark glasses and other protective devices while welding. Releases and regulates valves of oxygen and acetylene cylinders to control their flow into torch. Ignites torch and regulates flame gradually. Guides flame along joint and heat it to melting point, simultaneously melting welding rod and spreading molten metal along joint shape, size etc. and rectifies defects if any. **Welder while doing Arc welding**, fuses metals using arc-welding power source and electrodes. Examines parts to be welded, cleans them and sets joints together with clamps or any other suitable device. Starts welding power source and regulates current according to material and thickness of welding. Connect one lead to part to be welded, selects required type of electrode and clamps other lead to electrode holder. May join parts first at various points for holding at specified angles, shape, form and dimension by tack welding. Establish arc between electrode and joint and maintain it throughout the length of the joint. **Welder, operates** spot welding machine to joint metal sheet by resistance welding method. Feeds metal sheets to be welded according to type of machine and welds them by pressing paddle, or by automatic arrangements. **Welder while doing gas cutting**, cuts metal to require shape and size by gas flame either manually or by machine. Examines material to be cut and marks it according to instruction of specification. Makes necessary connections and fits required size of nozzle in welding torch. Releases and regulates flow of gas in nozzle, ignites and adjusts flame. Guides flame by hand or machine along cutting line at required speed and cuts metal to required size.

Welder while doing gas brazing, joints metal parts by heating using flux and filler rods. Cleans and fastens parts to be joined face to face by wire brush. Apply flux on the joint and heats by torch to melt filler rods into joint. Allows it to cool down. Clean and examines the joint. **Welder while doing Gas Tungsten Arc welding also known as Tungsten Inert Gas (TIG) welding** reads fabrication drawing, examines parts to be welded, cleans them and sets joints with clamps or any other suitable device. Selects suitable tungsten electrode, grinds the edges and fit in to the GTA welding torch. Selects gas nozzle and fit in to the GTA welding torch. Selects suitable filler rods and cleans them. Connects work piece with earth cable, Connects the machine with Inert gas Cylinder, regulator and flow meter. Starts the Constant current GTA welding machine, sets suitable welding current & polarity and inert gas flow. Establish arc through across a column of highly ionized inert gas between work piece and Tungsten electrode. Melts the metal and deposit weld beads on metal surfaces by passing the suitable filler rod in to the weld puddle. Joins metal pieces such as Steel, Stainless steel and Aluminium metals.

Welder while doing Gas Metal Arc welding also known as MIG/MAG Welding, reads fabrication drawing, examines parts to be welded, cleans them and sets joints with clamps or any other suitable device. Connects work piece with earth cable. Connects the machine with suitable gas Cylinder, regulator and flow meter. Connects pre-heater when CO₂ is used as shielding gas. Selects suitable wire electrode, feed it to welding GMA Welding torch through wire feeder. Selects contact tip gas nozzle and fit in to the GMA welding torch. Preheats joints as required. Starts the Constant Voltage GMA welding machine, sets suitable welding voltage & wire feed speed and shielding gas flow, produces arc between work piece and continuously fed wire electrode. Melts the metal and deposit weld beads on the surface of metals or joins metal pieces such as Steel, and Stainless steel metals. Plan and organize assigned work and detect & resolve issues during execution in his own work area within defined limit. Demonstrate possible solutions and agree tasks within the team. Communicate with required clarity and understand technical English. Sensitive to environment, self-learning and productivity.

21. Carpenter [Duration: 1 year (2 semesters of six months each)] NSQF level-4:

Course Content:

In the first semester, trainee learns about elementary first aid, fire fighting, environment regulation and housekeeping etc. The trainee identifies timber/ wood, apply measuring, marking and testing instrument and other holding and supporting hand tools. He will be able to use various saws and portable power saw machines for Ripping, cross cutting, Oblique sawing and curve cutting etc. He will be able to analyze the surface finish with exact sizing by planning operation and apply various shaving tools or portable power planning machine. The trainee can apply various paring tools and analyze and choose the positioning and employ holding device for chiselling with better finish. He will be able to identify and classify various types of joints, analyze and prepare correct joint at correct position, related with strength and appearance. He will be able to make small wooden job as per drawing with schedule sizes of timber or alternatives of timber i.e. FRP, MDF, FOAM using various hardware, analyze and use various carving tools and convert a wooden block/ piece into a decorative article. The trainee will be able to preserve wooden item through surface finishing with various processes such as painting, polishing, varnishing etc.

In the second semester, trainee learns ripping, cross cutting, curve cutting etc. on band saw/ circular saw machine and grinding and setting of blade/ cutter. He can perform different operations on planning machine along with sharpening blades. (Range of operations – Surfacing, thickening, chamfering, edge bending etc.). The trainee can work on pedestal grinder (Range of operations – grinding of mushroom head, cutting edge of tools, drills, etc.). He can make holes of different sizes in correct location on wood work, can perform

different operations on wood turning lathe along with sharpening of cutting tools. The trainee can do different operations on Tenon and mortise machine, Sanding machine. He will be able to prepare different types of pattern, core box, core print etc. for moulding application with proper allowances and colour codes. Can produce component involving different operations of fitting and sheet metal work and check for functionality. The trainee will be able to prepare various roof truss, door and windows frame and shutters, assembling & fixing (wooden/ aluminium or PVC), Paint various door, windows frame, stair and furniture (wooden or aluminium), Prepare various type of wooden floor, partition wall etc. He will be able to check, identify, analyze and repair the wooden job. The trainee also undergoes two weeks project work at the end of each semester which gives them more practical exposure and helps to build up confidence level.

Skills acquired:

Carpenter, General makes, assembles, alters and repairs wooden structures and articles according to sample or drawing using hand or power tools or both. Studies drawing on sample to understand type of structure or article to be made and calculates quantity of timber required. Selects timber to suit requirements. Marks them to size using square, scribe etc. Saws, chisels and planes wooden pieces to required sizes and makes necessary joints such as half lap, Tenon mortise, dove-tail etc. using saws, planes, mortising, chisels, drills and other carpentry hand or power tools as required. Checks parts frequently with square, foot rule, measuring tape etc. to ensure correctness. Assembles parts and secures them in position by screwing, nailing or dowsing. Checks assembled structure with drawing or sample; rectifies defects, if any, and finishes it to required specifications. Alters, repairs or replaces components in case of old structures or articles in similar manner. May glue parts together. May smoothen and finish surface with sand paper and polish. May fix metal fittings to structure and polish. May fix metal fittings to structure or article made. May calculate cost of furniture. May sharpen his own tools.

Carpenter, Construction: Carpenter, Construction; Carpenter Building makes, assembles, alters and repairs doors, windows, frames and other wooden fixtures of building using hand or power tools or both. Studies drawings or samples and calculates quantity of timber required. Saws oversize pieces by power or hand tools or collects lumbers for making various components. Plans two sides of above pieces, marks off dimensions using tri-square, scribe, pencil etc., and reduces them to required sizes by adzing, sawing and planning. Marks off different members, cuts them as required and shapes and makes Tenon and mortise, half lap and other joints by sawing, chiselling, drilling and filling. Checks pieces frequently while sizing and shaping to ensure correctness. Assembles framework step by step by gluing, cramping, dowsing, nailing and screwing as required. Examines finished article for accuracy. Fits metal rods, hinges etc., to wood work where necessary and rectifies defects in fittings if any. Sharpens his own tools. May erect scaffoldings if necessary. Plan and organize assigned work and detect & resolve issues during execution in his own work area within defined limit. Demonstrate possible solutions and agree tasks within the team. Communicate with required clarity and understand technical English. Sensitive to environment, self-learning and productivity.

22. Wireman [Duration: 2 years (4 semesters of six months each)] NSQF level-4:

Course content :

Recognize & comply safe working practices, environment regulation and housekeeping. Work in a team, understand and practice soft skills, technical English to communicate with required clarity. Demonstrate knowledge of concept and principles of basic arithmetic, algebraic, trigonometric and apply knowledge of specific area to perform practical operations. Understand and explain basic science in the field of study including friction, simple machine and heat and temperature. Read and apply engineering drawing for different application in the field of work. Understand and explain the concept in productivity, quality tools and labour welfare legislation and apply such in day to day work to improve productivity & quality. Explain energy conservation, global warming and pollution and contribute in day to day work by optimally using available resources. Explain personnel finance, entrepreneurship and manage/organize related task in day to day work for personal & societal growth. Understand and apply basic computer working, basic operating system and uses internet services to get accustomed & take benefit of IT developments in the industry. Make good quality electrical wire joints for single and multistrand conductors suitable for applications with soldering and taking suitable care and safety. Draw and set up DC and AC circuits including R-L-C circuits with accurate measurement of voltage, current, resistance, power, power factor and energy using ammeter, voltmeter, ohm-meter, watt-meter, energy meter, power factor meter and phase sequence tester with proper care and safety. Make choices to carry out basic jobs of marking out the components for filing, drilling, and riveting, fitting and assembled using different components independently. Identify the type of batteries, construction, working and application of Ni-cadmium, lithium cell, lead acid cell etc. Demonstrate their charging and discharging, choosing appropriate method and carryout the installation and routine maintenance with due care and safety. Plan and install Pipe & Plate earthing. Measure earth resistance by earth tester. Select and perform electrical/ electronic measurements with appropriate instrument. Plan, draw, estimate material, wire up and test different type of domestic wiring circuits as per Indian Electricity rules and taking care of quality. Construction and working of MCB & ELCB. Test a domestic wiring installation

using Megger. Plan, draw, estimate material, wire up and test different type of industrial wiring circuits as per Indian Electricity rules and taking care of quality. Plan, draw, estimate material, wire up and test different type of commercial and computer networking wiring circuits as per Indian Electricity rules and taking care of quality. Plan and execute electrical illumination system viz. FL tube, HPMV lamp, HPSV lamp, Halogen & metal halide lamp, CFL, LED lamp etc. Construct and test Half-wave, full-wave, and bridge rectifiers with filter & without filter. Trouble shoot and service of DC regulated power supply. Understand the constructional features, working principles of DC machine. Starting with suitable starter, running, forward and reverse operation and speed control of DC motors. Conduct the load performance test of DC machine with due care and safety. Maintain and troubleshoot of DC machines. Understand the constructional features, working principles of Alternator set. Test, Wire-up and run alternator. Synchronization of Alternator with due care and safety. Understand the constructional features, working principles of single phase and 3 phase AC motors. Starting with suitable starter, running, forward and reverse operation and speed control of AC motors with due care and safety. Understand the types, constructional features, working principles of transformer (single & three phase) Connect and test Transformer. Prepare single line diagram and layout plan of electrical transmission & distribution systems and power plants with knowledge of principle applied. Make and test power connection to substation equipments with care and safety. Select, assemble, test and wire-up control panel. Plan, estimate and costing of different types of wiring system as per Indian Electricity rule.

Skill acquired :

Wireman, Light and Power installs various kinds of electrical wiring such as cleat, conduit, casing, concealed etc. in houses, factories, workshops and other establishments for light and power supply. Studies diagram and plan of wiring and marks light, power and other points accordingly. Fixes wooden pegs, sizes tubes, saws casings, etc. by common carpentry fitting and other processes, according to type of wiring needed. Erects switch boards and fixes switch box casings cleats, conduits ceiling roses, switches, meters etc. according to type and plan of wiring. Draws wire in two way or three-way wiring system as prescribed and makes electrical connections through plugs and switches to different points exercising great care for safety and avoiding short circuit and earthing at any stage of wiring. Fixes fuses and covers as per diagram and insulates all naked wires at diversions and junctions to eliminate chances of short circuit and earthing. Fits light brackets, holders, shades, tube and mercury lights, fans etc, and makes electrical connection as necessary. Tests checks installed wiring for leakage and continuity using megger, removes faults if any and certifies wiring as correct for connecting mains. Checks existing wiring for defects and restores current supply by replacing defective switches, plug sockets, blown fuse etc. or removing short circuits and faulty wiring as necessary. May repair simple electrical domestic appliances.

23. Plumber [Duration: 1 year (2 semesters of six months each)] NSQF level 4

Course Content: During the one year duration a candidate is trained on subjects Professional Skill, Professional Knowledge, Engineering Drawing, Workshop Science & Calculation and Employability Skills. In addition to this a candidate is entrusted to make/do project work and Extra Curricular Activities to build up confidence. The practical skills are imparted in simple to complex manner & simultaneously theory subject is taught in the same fashion to apply cognitive knowledge while executing task. The practical part starts with basic pipe work viz. cutting of pipes, threading, joining, etc. and finally to fitting, fixing and laying of hot & cold water pipe line, repairing and reconditioning of waste pipe line at the end of the course. The broad components covered under Professional Skill subject are as below:

In first Semester - The practical part starts with basic fitting in the beginning and the candidate imparted training on allied trades viz., carpenter, Welding (Gas & Arc), Masonry which leads to multi-skilling. In the basic fitting the skills imparted are marking, sawing, chipping, filing, measurement, soldering, brazing, drilling, grinding and observation of all safety aspects is mandatory. The accuracy achieved is of ± 0.25 mm. The safety aspects covers components like OSH&E, PPE, Fire extinguisher, First Aid etc. Cutting Pipes in different angle. Joining of pipes of different diameter and angles by gas welding, thread cutting on different types of pipes & fittings accessories. Making of brick wall and RCC casting. Brick wall cutting for concealing pipe line. Bending of Pipes, Making of pipe line circuit for water distribution, fixing Cocks & valve, Water analysis test, Water Pressure test are being taught.

In second this semester alignment and laying of humed asbestos pipeline & maintenance of drainage pipe line. Installation and maintenance of Electric pumps, Construction of inspection chamber, manhole, gutter, septic tank, socket etc. Testing of drainage pipe, Removal of leakage pipe line, Installation, fixing & maintenance of valve & cock, water meter, Fixtures, hot & cold water pipe line, Repairing & reconditioning of waste pipe line, Repairing & reconditioning, scraping & painting of sanitary fittings are being taught in the practical. Professional Knowledge subject is simultaneously taught in the same fashion to apply cognitive knowledge while executing task. In addition components like Physical properties of engineering materials, different types of iron, properties and uses, Heat & Temperature are also covered under theory part. Total three projects need to be completed by the candidates in a group. In addition to above components the core

skills components viz., Workshop calculation & science, Engineering drawing, employability skills are also covered. These core skills are essential skills which are necessary to perform the job in any given situation.

Skills acquired:

Plumber, General; lays out, assembles, installs and maintains sanitary fittings and fixtures, sewage and drainage systems, heating and sanitary systems, gas and water pipe lines etc. Receives instructions from Sanitary Engineer or Civil Engineer regarding layout of pipes, gas or water mains, position of fixtures and fittings, etc. Examines drawings or other specifications regarding size and dimensions of area where sanitary fittings or pipe are to be fitted or laid. Marks points at places to indicate position for fixing brackets and laying pipes. Drills passage holes in walls or floor of premises and fixes necessary brackets, stands, holders etc. to keep or hold fittings and fixtures in position, using nuts, bolts, clamps etc. and tightens them with hand tools. Cuts reams, threads and bends pipes as appropriate. Ensures that pipe lines are laid properly by Pipe Fitter. Joins pipes with sockets, Tees, elbow etc. or with molten lead or lead wool. Caulks joints (operation of making joint seam tight to withstand pressure) and tests them for leaks with pneumatic or hydraulic pressure. May repair and maintain sewerage and pipe lines by replacing washers on leaky faucets, mending burst pipes, opening clogged drains, etc. May do lead burning, dressing and bossing of lead pipe and sheet lead, inlaying of wooden tanks, construction of septic tanks etc.

Plumber, Operations; is responsible for operation of plumbing system used in housing, commercial and institutional setups.

Plumber, General-Installation and Repair; Plumber (General)-II is responsible for installation and repair plumbing systems including those of advanced sanitary fixtures as per manufacturer's specifications in housing, commercial and institutional setups.

Plumber, General Helper; is responsible for helping Plumber (General) by carrying and handling of tools and materials required in installation, minor repair and maintenance of plumbing systems.

Plumber, General Assistant; is responsible for assistance in, preliminary installation and minor repair work of basic plumbing systems in domestic, commercial and institutional setups.

Plumber, Maintenance and Servicing Assistant; is responsible for assistance in maintenance and servicing of pipes and sanitary fixtures in housing, commercial and institutional setups.

Plumber, Maintenance and Servicing; is responsible for assistance in maintenance and servicing of pipes and sanitary fixtures in housing, commercial and institutional setups.

Pipe Layer/Plumber Pipeline; Sewer Pipe Layer lays concrete, stone ware or clay pipes to form sanitary drains and sewers. Receives instructions regarding size and type of concrete, stone ware or clay pipe to be laid. Digs or gets earth dug along marked lines using spade, picks etc. to make trenches for laying pipes. Levels and smoothens bottom of trenches to proper gradient by scooping with shovels. Receives pipes of required size lowered into trench manually or by pulley and adjusts their position by hand or crow-bar for correct levelling and vertical and horizontal alignment. Joins pipes together using appropriate couplings, joints, rings etc. and closes joints by caulking with fibre and cement to prevent leakage. Tests joints by hydraulic or pneumatic pressure after sealing. Fills trench with earth to cover laid pipe and rams earth to avoid sinking. Is designated as PIPE LAYER WATERMAINS or WATER MAINS FITTER if engaged in laying cast iron or galvanized iron water pipe mains and in caulking their joints with lead to prevent leakage. May lay pipe lines to provide water connection to houses, sanitary sewers etc. May fix meters to stopcocks, remove defects from pipe lines and replace defective ones.

Pipe Fitter; lays, repairs and maintains, pipes for supply of water, gas, oil or steam in buildings, gardens, workshops, stores, ships etc., according to drawings or instructions. Examines drawings and other specifications or receives relevant instructions. Cuts passage holes for laying pipes in walls and floors. Cuts reams, threads and bends pipes according to specifications. Lays pipes in cut passage and assembles pipe sections with couplings, sockets, Tee's elbows etc. Levels position of pipes using spirit level for gravitational flow. Caulks joints, tests them for leakage with pneumatic or hydraulic pressure and secures pipe line to structure with clamps, brackets, and hangers. Fits water meters, taps etc. to pipe where necessary. Repairs and replaces leaky pipe lines, taps and joints and provides connections to overhead water tanks. Helps Plumber, General in fittings sanitary fittings to buildings. May join pipe sections and fittings.

Plumbers and Pipe Fitters, Other; perform number of routine and low skilled tasks such as assisting in laying pipes, making water tight joints, fitting sockets and reducers, threading pipes with taps and dies, removing leakages, etc., and are designated as Plumber Mate or Pipe Fitter Helper according to type of work done.

Plumber (Welder)/Plumbing (Sanitary Fixtures) Fitter Assistant; is responsible for welding activities related to plumbing works in housing, commercial and institutional setups.

Plumber (Welder) Assistant; is responsible for assistance in welding activities related to plumbing works in housing, commercial and institutional setups.

Plumber (Pumps and E/M Mechanic); is responsible for installation and repair of Pumps and E/M equipment used for different plumbing applications of housing, commercial and institutional Set ups.

24. Sewing Technology [Duration: 1 year (2 semesters of six months each)] NSQF level-4:**Course Content:**

Recognize & comply safe working practices, environment regulation and housekeeping. Work in a team, understand and practice soft skills, technical English to communicate with required clarity. Understand and explain the concept in quality tools and labour welfare legislation and apply such in day to day work to improve productivity & quality. Explain energy conservation, global warming and pollution and contribute in day to day work by optimally using available resources. Explain entrepreneurship and manage/organize related task in day to day work for personal & societal growth. Understand and apply basic computer working, basic operating system and uses internet services to get accustomed & take benefit of IT developments in the industry.

In first semester -Make hand stitches in the given fabric. Stitch the following using the given fabric Seams with seam finishes: Dart, Pleat, Tucks, Gathers & Shears, Frills, Hems, Casing, Edge Finishing, Neck line, Placket, Pocket, Collar, Sleeve, Cuff. Fix the fasteners on the given fabric. Mend the given fabric Draft a pattern for Ladies' Suit, Sew a Ladies' Suit with the help of the given pattern.

In second semester- Sketch the following garments:-Ladies' Tops/Short kurthies, Ladies' Suit, Nightwear (one piece/two piece), Sari Blouse, Dresses for New Born, Dresses for Toddler, Dresses for Kids. Construct the following garments with fitting and quality according the sketched designs:- Sari Petticoat, Ladies' Top/Short Kurthies, Ladies' Suit, Nightwear (One Piece with Yoke),Nightwear (Two Piece – Night suit),Sari Blouse (Simple Model - Plain),Dress for a Newborn (Jhabla),Dress for a Toddler (Sun Suit), Dress for Kids (Frock),Dress for Kids (Frock), Gent's Casual Shirt,Gent's Trousers.

Skills acquired:

This course is meant for the candidates who aspire to become Sewing Machine operator, Assistant to Designer, Assistant worker in Boutique, Assistant to Sample Garment Designer and Assistant to Garment Sample Coordinator.

25. Computer Hardware & Network Maintenance [Duration: 1 year (2 semesters of six months each)] NSQF level-4:

Course Content: In first semester the trainee learns about safety and environment, use of first aid kit. They learn about basics of electrical and electronic component related to hardware and networking system. They will learn to assemble and repair desktop PC with all its internal components. Trainees will able to install different types of operating system and all other application software, customization of OS, updating device driver, setting firewall security, junk file removal, data backup and data recovery techniques. They also learn to assemble and repair Laptop PCs and its internal hardware components. In this semester the trainees also learn to work on office package (word, excel, power point). At the end of this semester trainees can go on industrial visit or projects specified in the syllabus.

In second semester the trainee learns to install and work with Linux environment. They will able to install and configure different types of printer, plotter, scanner and troubleshoots its faults. The trainees will learn to setup and configure networking system using various network devices using crimping, punching, setting IP addressing techniques. They are able to share and control resource and internet connection over network. They learn to secure networking system from different types of attacks. They also learn to install and configure Windows and Linux server. Finally the trainees will learn about internet and different types of web browsers. At the end of this semester trainees can go on industrial visit or projects specified in the syllabus.

Skills Acquired:

Computer System Hardware Analyst/Hardware Engineer; analyses data processing requirements to plan data processing systems that provide system capabilities required for projected workloads and plans layout and installation of new system or modification of existing system. Confers with Data Processing and Project Managers to obtain information on limitations and capabilities of existing system and capabilities required for data processing projects and projected work load. Evaluates factors such as number of departments serviced by data processing equipment, reporting formats required, volume of transactions, time requirements and cost constraints, and need for security and access restrictions to determine hardware configurations. Analyses information to determine, recommend, and plan layout for type of computers and peripheral equipment, or modifications to existing equipment and system, that will provide capability for proposed project or work load, efficient operation, and effective use of allotted space. May enter data into computer terminal to store, retrieve, and manipulate data for analysis of system capabilities and requirements. May specify power supply requirements and configuration. May recommend purchase of equipment to control dust, temperature, and humidity in area of system installation. May specialize in one area of system application or in one type or make of equipment. May train users to use new or modified equipment. May monitor functioning of equipment to ensure system operates in conformance with specifications.

Data Communication Analyst/Network Administrator; researches, tests, evaluates, and recommends data communications hardware and software: Identifies areas of operation which need upgraded equipment,

such as modems, fiber optic cables and telephone wires. Conducts survey to determine user needs. Reads technical manuals and brochures to determine equipment which meets establishment requirements. Visits vendors to learn about available products or services. Tests and evaluates hardware and software to determine efficiency, reliability, and compatibility with existing system, using equipment such as computer terminal and modem. Analyses test data and recommends hardware or software for purchase. Develops and writes procedures for installation, use, and solving problems of communications hardware and software. Monitors system performance. Trains users in use of equipment. Assists users to identify and solve data communication problems. May write technical specifications to send to vendors for bid. May oversee or assist in the installation of communications hardware. May perform minor equipment repairs.

26. Attendant Operator (Chemical Plant) (AOCF) [(Duration: 2 years (4 Semester)]NSQF level-5:

Course Content:

During the two-year duration a candidate is trained on subjects Professional Skill, Professional Knowledge, Engineering Drawing, Workshop Science & Calculation and Employability Skills. In addition to this a candidate is entrusted to make/do project work and Extra Curricular Activities to build up confidence. The practical skills are imparted in simple to complex manner & simultaneously theory subject is taught in the same fashion to apply cognitive knowledge while executing task. The practical part starts with allied trade training viz basic fitting, followed by gas welding and laboratory experiments in basic physics and chemistry. Practical skills related to unit operations comprising of Fluid flow, Heat transfer, and Mass transfer Mechanical operations are covered in period of two years.

In first Semester- The practical part starts with allied trades viz., basic fitting In the basic fitting the skills imparted are Hack-sawing, marking, punching, Chiseling, Filing, Drilling, countersinking, counter boring, reaming, Taping and observation of all safety aspects is mandatory. Basic physics and chemistry practical covers conducting experiments in laboratory to determine physical constants, verification of laws, to determine concentration of solutions, PH, melting point, boiling point, compare properties of metals & alloys, prepare chemicals. The safety aspect covers components like PPE, Fire extinguisher, First Aid.

In second Semester –This semester starts with performing different operations or experiments related to safety and general awareness in chemical industry. Identification, installation /connection of instrument/devices to measure pressure, temperature, flow and level, density are covered. Skills to execute pipe joints, fittings valves on pipes, dismantling, overhauling, cleaning & assembling valves, different machines & components used for fluid transportation such as centrifugal pump, gear pump, metering pump, screw pump, multistage compressor are achieved in this semester. Dismantling, repairing and assembling of different damaged mechanical components used for power transmission such as Gearbox, bearings are also covered.

In third Semester – This semester covers Unit operations i.e. fluid flow, heat transfer and mass transfer operations. Skills to operate different machines/equipment such as Shell and tube Heat exchangers, evaporators, Distillation columns are gained in this section. Study of manufacturing processes and pressure vessels, petroleum refining is covered in this section.

In fourth Semester – Mass transfer operations such as Solvent extraction, Leaching, Absorption, Crystallization, and Drying are taught. Mechanical operations such as Size reduction, mixing conveying, and filtration are also covered in this semester. Study of chemical reactor, plant utilities- steam, cooling tower, chilled water, instrument air are covered in this section. Pollution in chemical industry and manufacturing processes are also taught.

Skills acquired:

Laboratory Assistant, Physical Laboratory Assistant, Physical assists and carries out routine duties in physical laboratory as directed by physicist in conducting experiments. Sets up required apparatus and instruments in position as directed for conducting experiments. Makes necessary electrical connection to equipment and instruments as required. Records routine and other observations as indicated by instruments and makes necessary calculations as directed. Removes apparatus when not in use, cleans and maintains them in good condition. May do minor repairs to equipment and apparatus. May store and maintain account of instruments, equipment, apparatus etc., if required.

Laboratory Assistant, Chemical Laboratory Assistant, Chemical arranges and sets various chemicals, instruments and apparatus such as salts, acids, balances, heaters as desired by Chemists for conducting experiments in chemical laboratory. Sets up required apparatus and equipment as directed by Chemist. Performs routine tasks, such as preparations of standard solutions and common reagents, weighing and measuring of salts and chemicals, filtration, precipitation etc. and conducts simple tests as directed by Chemist. Cleans and maintains balances. Changes Kipps apparatus and maintains laboratory clean and tidy. Keeps required chemicals readily available and replenishes stock from stores. May clean special apparatus, if required. **Process Man, Chemical** Process Man, Chemical process chemical ingredients by mixing in specific proportions, heating, distilling, cooling, filtering, blending, percolating, refining, pulverising, etc. for causing chemical reactions for research or production. Obtains scheme of processing from Chemist; sets apparatus

and equipment; collects chemicals in required quantities; regulates feed of gaseous, liquid or solid materials into equipment. Checks progress of process by looking through peep holes, observing temperature readings, pressure gauges and other instruments and making simple chemical tests; regulates material feed, and heating and cooling devices and makes other adjustments necessary to ensure that processes are correctly carried out. Strains, filters and distils chemical substances to obtain required product in purified form. Implements safety measures in regards to operation of plant/machinery and in handling and processing materials such as acids, oils and maintains machinery. May be designated, according to type of material processed or plant in charge of, such as DISTILLING STILL ATTENDANT, FILTER PRESSMAN, etc.

Bearing Maintenance Bearing Maintenance, identify the problems in the equipment, rectify the root causes for leakages, replaces the bearings, lubricates the bearings, ensures fitness of all types of bearings in the plant and carry out routine maintenance.

Reactor Converter Operator Reactor Converter Operator (Chemical Process, except Petroleum) operates or tends number of pieces of equipment, other than those used for treating petroleum, which perform sequence of complex operations in chemical reaction process. Regulates feed of gaseous, liquid or solid material into equipment. Checks progress of process by looking through peep holes, observing temperature readings, pressure gauges and other instruments and making simple chemical tests. Regulates material feed and heating or cooling devices and makes other adjustments as necessary to ensure that processes are correctly carried out.

Pump Man (Petroleum Refining) Pump man (Petroleum Refining) controls pumps and manifold systems to circulate crude semi compressed and finished petroleum products, water and chemical solutions through processing and storage departments of refinery according to schedules or instructions and plans movement of product through lines of processing and storage unit, utilizing knowledge of interconnections and capacities of pipelines, valve manifolds, pumps and tanks. Synchronizes activities with other pump houses to assure continuous flow of products and minimum contamination between products. Starts battery of pumps, observes pressure and flow meter and turns valve to regulate pumping speeds according to schedules. Turns hand wheels to open line valves to direct flow of product. Signals by telephone to operate pumps in designed units to open and closed pipeline and tank valves and to gauge, sample and determine temperature of tank contents. Records operating data, such as products and quantities pumped, stocks used, gauging results and operating time. May blend oil and gasoline. May repair pumps, lines and auxiliary equipment. **Evaporator Operator** Evaporator Operator; Pan Operator; Vacuum Pan Operator charges and operates evaporating tank, vacuum-pan or similar device to concentrate solutions by driving off excess water contents. Pumps weak (liquid) solution into evaporator tank or pan; operates vacuum pump to obtain vacuum in pan, if required; regulates flow of steam into heater coils of evaporator; periodically tests concentrations of solution by use of instruments or by making simple chemical tests; makes necessary adjustments to temperature and pressure to obtain required solution; pumps concentrated solution from evaporator for auxiliary heating. Implements safety measures in regard to operation of plant/machinery and in handling and processing materials, oils and maintains machinery. May tend auxiliary equipment such as settling tanks, preheating tanks, condensers and cooling equipment. May treat solutions, such as those of glue, glycerin, glucose and caustic soda and be designated accordingly.

Continuous Still Operator, Petroleum Continuous Still Operator, Petroleum; Still man, Petroleum operates one or more continuous stills for distilling or refining crude oil to obtain fuel gas, gasoline, kerosene, diesel oil, lubricating oil, wax, bitumen, etc. Reads processing schedules, operating logs, test results of oil samples, and laboratory recommendations to determine changes in equipment controls required to produce specified quantity and quality of product; moves and sets controls, such as knobs, valves, switches, levers, and index arms on control panels to adjust, maintain, and co-ordinate process variables, such as flows, temperatures, pressures, vacuum, time, catalyst, and chemicals, by automatic regulation and remote control of processing units, such as heaters furnaces, compressors, exchangers, recharges, absorbers. Moves controls to regulate valves, pumps, compressors, and auxiliary equipment to direct flow of product, reads temperature and pressure gauges and flow meters, records readings, and compiles operating records; tests products for specific gravity and observes their color to determine whether processing is being carried out properly; makes minor adjustments to equipment; shuts down still for cleaning and opens it up again; supervises workers who assist in operation of still. May fire oil or gas burning furnace through which oil is run to heat it to processing temperature. May specialize in a particular type of still, kind of oil processed, and be designated according to process involved or plant operated as ABSORPTION PLANT OPERATOR; PURIFICATION OPERATOR; STILLMAN; CRACKING UNIT; STILLMAN, POLYMERIZATION, etc.

Crusher Operator, Chemical Crusher Operator, Chemical operates power driven crushing machine to break solid lumps of chemicals or other materials into smaller size for further processing. Collects material to be crushed; fills hopper of machine by hand or by operating mechanical feed; fixes screen to machine to retain pieces which are too large. Operates controls to start, stop and regulate speed of machine; breaks oversize or jammed lumps with a hammer; discharges crushed material into outlet container-cleans crusher and work

area. May weigh the material before and after crushing to know loss in crushing. May be designated according to type of process adopted/industry attached to.

Autoclave Operator Autoclave Operator; Sterilization Attendant charges, operates and unloads an autoclave (high-pressure vessel) for processing chemicals, oils, or sterilizing bottles, ampoules, etc. Charges or loads vessel with predetermined quantities of chemicals or objects; checks valves for operation; raises temperature of autoclave by increasing steam pressure. Observes pressure and temperature gauges, thermometers, timings and other instruments and makes necessary adjustments to ensure that process or sterilization is carried out correctly. Unloads product on completion of process and prepares vessel for next batch. Implements safety measures in regard to operation of plant/machinery and in handling and processing materials, and maintains machinery. May keep records. May be designated according to product processed or sterilized.

Batch Still Operator, Chemical Batch-Still Operator, Chemical operates one or more stills in which batches of liquid chemicals, other than petroleum, are treated to separate them into their chemical constituent such as alcohol beverages, perfume or drugs or to refine those constituents. Manipulates feed valves to fill tank with liquid to desired levels; adjusts valves to control pressure in tank and rate of heating; regulates valves to control amount of condensed vapors returned to tank to enrich vapors driven from it; draws, from containers receiving condensed vapors, product samples for testing either on their own or in laboratory; determines by purity of samples, container to which product should be routed. Maintains record of raw materials drawn, quantity consumed to indicate production capacity of plant; enters in log book condition of plant and abnormalities noticed in distillation during shift for report to Chemist. May make adjustments to still auxiliaries such as condensers and pumps. May operate ordinary type of wood-fire distillation plant. May be designated according to type of chemicals used and industry attached to e.g. AMMONIA STILL OPERATOR; ALCOHOL STILL OPERATOR; BENZENE STILL OPERATOR.

Continuous Still Operator, Chemical Continuous Still Operator, Chemical; Distillation Operator tends one or more stills in which continuous feed of liquid chemical, other than petroleum is heated to separate into chemical constituents by regulating temperature, pressure, cooling valves etc. Adjusts feed valves to allow liquid to enter still at prescribed rate; adjusts controls to maintain temperature at various levels of still and to maintain prescribed pressure in still; regulates valves to control amount of condensed vapor returned to still to enrich vapors driven from it; draws, from containers receiving condensed vapors, product samples for testing either themselves or in the laboratory; determines by purity of samples to which container product should be routed; returns impure samples to main stock; maintains record of temperature, pressure and feed indicator readings. May make adjustments to still auxiliaries such as heat exchangers, absorbers, strippers, boilers and compressors. May specialize in type of chemical treated and be designated accordingly.

Ammonia Operator/Ammonia Plant Operator Ammonia Operator controls converter and auxiliary equipment that combine hydrogen and nitrogen to produce anhydrous ammonia: Lights burner and starts pumps, compressors, scrubbers, and absorption units. Moves controls on panel board to regulate temperatures of solutions and opens valves to admit heated and purified air and hydrogen into combustion chamber of burner, where nitrogen driven from air combines with hydrogen to form ammonia. Reads instruments, such as thermometers, pressure gauges, and potentiometers. Makes control adjustments according to operating instructions and charts. Pumps fresh solutions into scrubbing and absorption towers when readings indicate excessive alkalinity. Records operational data in logbook. May compute percentage of hydrogen and ammonia in burner gases, using standard test procedure.

Acid Plant Operator Acid Plant Operator maintains and operates acid plant for manufacturing sulphuric, hydrochloric, nitric or other acids by treating raw materials (Sulphur, salts, etc.) with acid or steam. Collects required amount of raw materials for preparation of desired acid. Sets up and checks equipment, valves, gauges and other instruments; charges vessel with predetermined amount of chemicals, or regulates feed of materials into equipment; controls temperature in vessel by adjusting steam pressure; checks progress of process by looking through peep holes, observing temperature readings, pressure gauges and other instruments and making simple chemical tests; regulates material feed and heating or cooling devices, as necessary; removes acid when process is completed. May keep records. May be designated according to product or process, e.g. SULPHURIC ACID PLANT OPERATOR; HYDROCHLORIC ACID PLANT OPERATOR; FERTILISER MAKER; PHOSPHORUS MAKER.

Digester Operator, Paper Pulp Digester Operator, Paper Pulp; Rag Boiler Operator, Paper Pulp operates boiler (cooker) to convert raw materials into paper pulp. Supervises charging of cooker with ingredients such as wood chips, rags, straw and waste paper shreds. Directs adding of chemicals and admission of steam to raise temperature and pressure. Observes gauges and makes adjustments to maintain desired operating conditions. Tests samples by titration or color tests to determine stage of cooking. When the process completes, drains liquid from digester and instructs others in removal of cooked pulp. May be designated according to materials processed or chemicals used.

Mixing Machine Man Attendant (Chemical) Mixing Machine Attendant, (Chemical) feeds and tends machine to mix and blend different solid or liquid ingredients in required proportions. Weighs ingredients according to formulae or specifications and feeds prescribed quantities of ingredients into machine container by hand or by operating valves, pumps or mechanical loaders; starts machine agitators to mix materials thoroughly; adds further ingredients, if required; runs machine until mixing process is completed; removes mixture from machine container; cleans machine and work area and prepares machine for fresh run. Observes and reports abnormalities in blending and mixing.

Filter Press Operator Filter Press Operator operates filter press machine to filter impurities or other insoluble materials from slurries, chemical solutions or mother liquids. Opens filter press and covers filter plates with canvas, paper or other filtering media; closes press and ensures that its joints make a liquid tight seal; adds diatomaceous earth, saw dust, other settling compound to solution to precipitate impurities; pumps when specified pressure is reached. Removes filtered impurities from screen with compressed air, water or steam, and dislodges solid materials caught between frames. Occasionally replaces damaged filter media and adjusts and makes minor repairs to equipment.

Hydro Extractor Operator Hydro Extractor Operator, Centrifuge Operator operates centrifuge machine that separates solids from liquids, or liquids of different specific gravity. Fills drum of machine with liquid material. Starts machine and adjusts drum speed to obtain efficient separation of substances; empties containers when separation is completed. May fix and clean filtering media in machine, operate heating attachment on machine and test samples for moisture content. May be designated according to type of materials separated.

Drying Chamber Attendant (Drugs)/Chamber Operators Drying Chamber Attendant, Drug dries tables and powder in drying chamber. Spreads out powder and tables evenly in trays and loads trays on racks and shelves in drying chamber. Closes chamber and applies heat for fixed period of time; checks at frequent intervals to ensure that products are properly dried. Keeps drying chamber clean.

Extraction Attendant, Chemical Extraction Attendant; Chemical, Extraction Operator; Extractor Battery Attendant; Kettle Operator; Percolation Attendant; Acidification Operator boils necessary ingredients in kettles, vats, pans, and regulates temperature, pressure etc. as directed by Process man, Chemical, to effect desired chemical reaction. Collects different ingredients in required proportions and feeds them into pan separately or together, according to specification, adding required amount of fluids and other liquids, mixing them by stirrer. Switches on plant, injecting steam to boil and mix ingredients; observes temperature, pressure gauges, timings and other instruments, making adjustments, where necessary, to ensure process is complete. Collects samples for observation and test; drains stuff for storage; cleans pan and work place. Implements safety measures in regard to operation of plant/machinery and in handling and processing materials, oils and maintains machinery. May tend open or wood fire pan. May be designated according to type of pan or industry associated with. May be designated, according to type of material processed or plant in charge of, type of chemicals used and industry attached to, process involved or plant operated as such as DISTILLING STILL ATTENDANT, FILTER PRESSMAN, AMMONIA STILL OPERATOR; ALCOHOL STILL OPERATOR, BENZENE STILL OPERATOR. May specialize in a particular type of still, kind of oil processed, and be designated according to ABSORPTION PLANT OPERATOR; PURIFICATION OPERATOR; STILLMAN; CRACKING UNIT; STILLMAN etc.

27. Multimedia, Animation & Special Effects [(Duration: 1 year (2 semesters)] NSQF Level 4

Course Content: In first semester the trainee learns about safety and environment, use of fire extinguishers. They learn about computer peripherals, Windows interface and its related software installation process. Trainees will work with MS Office package for basic knowledge of computer. Trainees will work with Photography like Adobe Photoshop to edit image, retouch and fixing image using color, filter and for digital painting. They also learn and experience with application software with Adobe Photoshop illustrator for advance editing and graphic design. In this semester the trainees also learn Videography to practice the craft of film making, video streaming with advance features of camera. At the end of this semester trainees can go on industrial visit or projects specified in the syllabus.

In second semester the trainee learns to browse internet, load/download video streaming and secure data from different cyber attack. They will work with Adobe Premier for video editing, mixing audio, text, image and video. Trainees will work with Adobe after effect to add special effect and compositing on video. They will work with Flash to create 2D animation, graphic illustration and compositing sound animation. . The trainees will learn and experience in 3Ds Max to create 3D architectural Design, 3D modeling and texturing. Finally the trainees will work with Maya to create 3D animation, 3D modeling, Texturing, Rigging, Lighting, Rendering artist. At the end of this semester trainees can go on industrial visit or projects specified in the syllabus.

Skills Acquired:

Multi Media Artist and Animator/Animator: Multi-Media Artists and Animators create special effects, animation, or other visual images using film, video, computers, or other electronic tools and media for use in

products or creations, such as computer games, movies, music videos, and commercials. Apply story development, directing, cinematography, and editing to animation to create storyboards that show the flow of the animation and map out key scenes and characters. Assemble, typeset, scan and produce digital camera-ready art or film negatives and printer's proofs. Convert real objects to animated objects through modelling, using techniques such as optical scanning. Create and install special effects as required by the script, mixing chemicals and fabricating needed parts from wood, metal, plaster, and clay. Create basic designs, drawings, and illustrations for product labels, cartoons, direct mail, or television. Create pen-and-paper images to be scanned, edited, coloured, textured or animated by computer. Create two dimensional and three-dimensional images depicting objects in motion or illustrating a process, using computer animation or modelling programmes. Design complex graphics and animation, using independent judgment, creativity, and computer equipment. Develop briefings, brochures, multimedia presentations, web pages, promotional products, technical illustrations, and computer artwork for use in products, technical manuals, literature, newsletters and slide shows.

Cameraman, Animation: Cameraman (Animation) operates special camera to make animated cartoon motion picture film. Discusses with Director and Producer, (Film) and renders advice about camera movements and feasibility of variety of shot; envisages in script and chart and suggests alternatives wherever necessary. Receives animation charts and drawings. Sets and adjusts camera and lighting exposure appropriate to type of film used and mood and effect to be emphasized. Installs frame on camera table for exposure and positions overhead camera suspended securely over frame. Shoots frame by frame in a predetermined sequence and regulates exposure and aperture to obtain special effect such as fade out or fade in. Instructs Laboratory Technicians about method of processing of films, which need special treatment for effective development of striking feature of certain shots.

28. Solar Technician (Electrical) [(Duration: 1 year (2 semesters)] NSQF Level 4

Course Content : During the two-year duration of Solar Technician (Electrical) trade a candidate is trained on professional Skill, professional Knowledge and Employability Skill. In addition to this a candidate is entrusted to undertake project work and extracurricular activities to build up confidence. The broad components covered related to the trade are categorized in four semesters each of six months duration. The semester wise course coverage is categorized as below:-

In first semester the trainee learns about safety and environment, use of fire extinguishers, artificial respiratory resuscitation to begin with. He gets the idea of trade tools & its standardization, identifies different types of conductors, cables & their skinning & joint making. Basic electrical laws and their application in different combinations of electrical circuit are practiced along with laws of magnetism. Performs testing by various Electrical Instruments like Wattmeter, Energy meter, etc. Performs basic Electric energy calculations and understand transmission and distribution of electrical power. The Trainee understands natural planetary movements and sunlight's path. Measures intensity of solar radiation, analyzes shadow effect on incident solar radiation, plots curve of radiation measured and draws a solar map with respect to time for a location. The Trainee learns about characteristics of Photovoltaic cells and modules, Batteries, Charge Controllers and constructs small Solar DC appliances.

In second semester the Trainee learns to arrange and test solar batteries and their correct disposal. Learns connections and testing of Solar Panel, Charge Controller, Battery Bank and Inverter. Learns types of Inverters used in the Solar system and their application according to the requirements of the project. Prepares bill of material for small, medium and mega solar projects. Plan and prepares reports on building integrated solar mount. Installation and commissioning of Solar PV plant and hybrid plants. The Trainee learns various tests pertaining to PV Modules and their installation as per IEC standards. Understands manufacturing process of solar panels, prepare and commission marketable solar products viz., solar water pump, solar street light, solar fertilizer sprayer etc. The Trainee learns about electrical maintenance of Inverters/Cables/Junction boxes, inspection of mounting structure of solar modules and replacement of defective fixtures.

Skills Acquired:

Solar Panel Installation Technician; is also known as 'Panel Installer', the Solar Panel Installation Technician is responsible for installing solar panels at the customers' premises. The individual at work checks the installation site, understands the layout requirement as per design, assesses precautionary measures to be taken, installs the solar panel as per customer's requirement and ensures effective functioning of the system post installation.

Solar PV System Installation Engineer; is responsible for designing and installing the solar photovoltaic system at the customer's premises to meeting their power requirement. The individual at work evaluates the installation site, designs the installation, plans and arranges for materials, and ensures smooth installation process. The individual also supervises the installation technicians' work.

Solar PV System Maintenance Technician; is responsible for maintenance and effective functioning of the installed solar panels. The individual at work cleans the installed solar modules, checks the photovoltaic system for uninterrupted power output and identifies faults in the PV system.

Module Assembly Technician; is responsible for fixing frames and junction box in the solar module. The individual at work prepares the solar module for final assembly, frames the module and fixes the junction box with cables on the rear side of the module. The individual is also responsible for connecting the tabbing wire from the module to the junction box and soldering them.

29. House Keeper [Duration: 1 year (2 semesters of six months each)] NSQF Level 4

Course Content: In the first semester, the trainee learns about elementary first-aid, firefighting, environment regulation and housekeeping, etc. The trainee understands the importance of personal hygiene, cleanliness and basic principles of sanitation of the environment. He practices basic and special cleaning procedures, maintenance of toilets. He learns the different process of water treatment and purification, removal of bacteria. Trainees gather knowledge of removal and control technique unwanted odours in the premises. He learns the methods of handling and disposal of solid, liquid waste. He knows the methods of extinction of fire by the different fire fighting equipments and awareness of handling the dangerous situations occurring by natural calamities. He will be able to supervise the precaution, control and eradication of the pest, rodent and animal nuisance.

In the second semester, the trainee learns to maintain the environment pleasant to boarders, staff and visitors. He learns to make aesthetic and suitable arrangement of soft furnishing. The trainee learns quantitative and qualitative requirement of lightings in different areas. The trainee acquires knowledge in linen services, viz. selection, procurement, storing, sterilizing, replacing and accounting. The trainee learns to maintain house-keeping equipment. The trainee also supervises both internal and external environmental hygiene of lodging premises and carries out infection control measures. He monitors and maintains various housekeeping records and documents. He acquires knowledge of basic computer operations to maintain the material and service management data. The trainee also undergoes two weeks on-the-job training in various hotels at the end of the second semester which gives them more practical exposure to banquet and lodging environment.

Skills Acquired: Housekeeper (Domestic); organizes and supervises work of Domestic Servants for maintaining house in clean and orderly manner. Allots work to various staff under control and supervises their work. Ensures proper maintenance and cleanliness of house. Purchases provisions and other necessities as advised and maintains accounts. Looks after needs and comforts of guests and visitors. May also look after children. May assist in shopping.

Domestic Housekeepers, Others; include housekeepers who organize, supervise and carry out housekeeping functions in out residential building. May collect fruits from the garden and rent and pay taxes. Housekeeper maintains a clean, sanitary, comfortable and tidy environment for either private households or commercial establishments. Housekeeper able to :- Perform a variety of cleaning activities such as sweeping, mopping, dusting and polishing, Sort, wash, load and unload laundry, Iron and press clothing and linen, Ensure all rooms are cared for and inspected according to standards, Operate mechanized cleaning equipment, Maintain all cleaning equipment and materials in a safe and sanitary working condition, Protect equipment and make sure there are no inadequacies, Notify superiors on any damages, deficits and disturbances, Deal with reasonable complaints / requests with professionalism and patience, Answer over telephone and take messages, Check stocking levels of all consumables and replace when appropriate, Maintain record of related expenditure, Adhere strictly to rules regarding health and safety and be aware of any company related practices, Maintain house keeping control desk, importance, role, Co-ordination, check list, key control, Handling Lost and Found, Handling of Guest queries, problem, request, Being able to use the equipment safely and efficiently, Prepare different flower arrangements for different areas- lobbies, front office, restaurants, guestrooms, banquet halls etc. An awareness of green issue

30. Front Office Assistant [Duration: 1 year (2 semesters of six months each)]:NSQF level-4:

Course Content :

In first semester, the trainee learns about safety and environment, adheres to all safety procedures and informs management. Confers and cooperates with other departments as needed to ensure coordination of activities. This semester includes answering inquiries pertaining to hotel services, registration of guests, shopping, dining, entertainment, and travel directions, carryout responsibility for proper key control and other security measures, keep records of room availability and guests' accounts, operates the front office computer system, familiarization with office machines, networking and internet communication concept.

In second semester, provides excellent interpersonal communication and customer service skills, accommodates guests of hotel by greeting, performing guest transactions. This semester includes up-selling and suggestive selling techniques to increase the revenues of the business, responsibility to maintain guest departure & post departure activities, start-of-shift activities, handling cash and non-cash transaction, bucket

check, conflict management, Night Audit for forecasting the previous sales and inventory, performing computation, briefing and debriefing checklist, Use paging system for the most complete and reliable solution to improve your business efficiency and observing the rules and regulations regards to checking in and checking out.

Skills Acquired:

Front Office Assistant; receives customers, attends to enquiries, assigns rooms after consulting register for availability of room and looks after requirements of patrons. Settles terms and allots required accommodation if available to customers. Requests customers to fill and sign register to establish identity, time of arrival and expected departure. Gets statutory form filled up by foreign visitors coming to stay. Guides customers to allotted rooms, maintains hotel 'Board' up-to-date showing name of occupants, etc. Maintains Hotel record up-to-date showing total number of rooms already occupied, rooms booked or reserved to show correct position of accommodation. Gives information to House Keepers, dining section and kitchen departments regarding arrival of new-comers and their requirements. Supplies details of services rendered to customers to concerned officer for preparing bills for presentation to customers. Presents bills to customers and releases amount from them prior to their departure. Incoming and outgoing postal dealings, forward messages on behalf of management and delivers it to clients. Attends the customer for other requirements. Trainee may be required to do correspondence.

31. Travel & Tour Assistant [Duration: 1 year (2 semesters of six months each)]: NSQF Level 4

Course content: In the first semester, the trainee learns about Travel & Tourism Industry, Duties, Responsibilities, Career opportunities of Travel & Tour service personnel etc. The trainee identifies different Components and elements of Tourism. He understands the importance of Tourism motivation, Factors affecting growth and development of International & national Tourism, develop communication skill, personality traits like right attitude, politeness & body language during interaction with the guest. The trainee learns to arrange & setup linkages with hotels, transport agencies & other segments of tourism Industries. He learns about Travel formalities - Passport, Visa etc. He practices Tour planning & programming like Travel Information & cancellation of the Tourism reservation, Ticketing preparation & marking of tour package etc. He learns to do Market research & tour package formulation, assembling, processing & disseminating information in destination, Preparation of Itinerary & post tour managements. In the second semester, the trainee learns about growth & development of Tourism in India, collect information regarding heritage, classical, religious & other attractive tourism resources & facilities available for tourists. He gains knowledge of Tourism promotional festivals, Museum & art galleries, Important Tourism circuits etc. collecting information & preparing calendars, maps etc. He acquires the knowledge of STP(Segmentation, Targeting & Positioning) for tourism Marketing & Sales Promotion. He understands Procedure of travel office management, selling the package by explaining the features facilities learning subjects like Aviation Geography- Time differences, Flight time, elapse time, Booking Familiarization, Important Airlines, Airport of India, coding & decoding of country domestic ticketing etc. The trainee learns to Plan & Programme tour using costing concept, software packages, websites related to the tourism. Identify different sources of accidents & precaution to be considered on tour, Handling the different safety equipment.

Skills Acquired:

Travel Guides; accompany individuals or groups on trips, sightseeing tours and excursions and on tours of places of interest such as historical sites, industrial establishments and theme parks. They describe points of interest and provide background information on interesting features.

Travel Agent; plans travels, provides related information and arranges accommodation, itinerary and other facilities for tourists, officials, businessmen and educational or other parties. Receives information from persons, seeking help and necessary facilities. Answers inquiries, offers suggestions and provides descriptive literature road maps etc., pertaining to trips, excursions, shopping and entertainment features. Discusses routes, time schedules, baggage limits, rates and types of accommodation with patrons to determine their arrival and departure times and assists personnel to complete travel forms, visas and other official and business transaction pertaining to travel. Plans itinerary and makes travel, baggage handling, passage reservations, accommodation and other arrangements as sought within available funds. Delivers travel and reservation tickets and connected papers to party or authorized person, informs him of the arrangements made and collects, expenses incurred and service charges either through bank or in cash. May arrange for road transport camping and other facilities if desired. May arrange study travel for students going abroad.

Tourist Guide; guides tourists and visitors to places of interest and explains historical background and importance of site. Accompanies tourists on their excursions to and around places of tourist interest and explains historical, cultural, social, religious and architectural significance of monuments. Answers questions of tourists relating to various economic and social aspects of life or people. May assist tourists in shopping. May act as interpreter to tourists to converse with people and or shopkeepers, hoteliers, etc.

Guides, Other: Travel Guides and Ground Hosts, other include all other worker, engaged in guiding, ground hosting and assisting tourists and excursion parties in their travels and visits not elsewhere classified.

32. Driver cum Mechanic (Duration: 6 months)NSQF level-3:

Course content: Importance of trade training, List of tools & Machinery used in the trade. (5 hrs) 2. Health, Safety and Environment guidelines, legislations & regulations as applicable, Disposal procedure of waste Materials, Basic safety introduction, safety signs, Preventive measures for electrical accidents & steps to be taken in such accidents, Practice Use of Fire Extinguishers, Practice yoga, Stress Management, Perform Preliminary checking / identification of various vehicle parts / aggregates, Identify various gauges & Telltale, Lamps in the instrument panel & interpretation of readings, Perform Identification & use of different types electrical switches, Practice in Simulator, Practice Initial freeway Driving, Perform Pre – Driving Checks, Checking the document pertains to the driver and vehicle, Carryout Vehicle Starting Check the leaks of Perform Clutch Practice, Perform Steering practice, Brake practice, Perform Reverse Practice, Practice Driving According to Lanes Perform Cross country Driving, Perform Simulator Driving, Familiarization of operator manual, Perform Adjustment of brake padle play, Perform Cleaning and adjustments, adjusting injectors, Silencer pipe, cooling motor, Carryout Emission testing and adjustment of air fuel ratio, Check the Air conditioner and heater unit, Practice on using different type of vehicle jacks, Practice on using vehicle hand tool kit.

Skills Acquired: Driver Cum Mechanic (LMV) To drive Light Motor Vehicle safely & efficiently on public & private roads, following all Rule and regulations in force & giving no room for accidents that causing damage to other road users, public & private properties, passengers and goods being carried. Strictly maintaining scheduled times for passengers embarking/disembarking & goods loading /unloading. To collect passenger or goods as per information received from office. Maintain politeness with passengers and follow all the safety/security measures. Calculate appropriate fares communicating/collecting the same from passengers. Calculate the freight costs based goods weight & volumes and the distance and communicate / collect from the consigner. Proper discharge of passenger or goods at the appropriate place as per instruction and time schedules. Communicate & handover the passenger fare / freight amounts with relevant information to office / owner. Always keep statutory documents / records pertaining to self, the vehicle, passengers & goods & to present when demanded by the concerned authorities. Understand & follow the regulation while transporting the Hazardous goods. To know about the vehicle & various system available and use them judiciously. Maintain the vehicle in good working condition, doing pre-checks before starting the vehicle. Plan & carry out timely recommended services by manufacturers. Maintain operating vehicle economically by achieving good KMPL & better tyre life. To maintain good relationship with other crew members and be courteous with other road users. Maintain physical & mental fitness all the times though stress releasing methods

33. Digital Photographer [Duration: 1 year (2 semesters of six months each)]:NSQF level-4:

Course Content:

In the first semester, the trainee learns about elementary first-aid, firefighting, environment regulation and housekeeping, etc. The trainee identifies trade tools, digital cameras, compact and SLR. The trainee will be able to do the practical by the use of natural light, tungsten light, fluorescent light, single and multiple electronic flash reflectors, exposure meters, studio flash and its accessories. They will also be able to do the practical on various lighting techniques for different lenses and will do practice on special areas of photography in outdoor and indoor conditions .They will be able to do practical on computer system by digital editing software, printing the photographs taken by digital cameras and will be able to do the image transportation to the storage media, sending photographs through E-mail and to Scan photographs, capture frames and analysis of images. There will be a visit to studio for six weeks where they will be able to handle the digital Video cameras, Tape, DVD, HDD, accessories and exposure to take different common shots, dimension of images and movements as per requirement.

In the second semester, the trainee will be able to do lighting of different areas of video shooting, practice on three point lighting indoor and outdoor. Taking photographs using different types of lenses using different aperture, shutter speed setting for still, Video camera, CCTV and spy camera. Taking photographs of portrait, studio photography, Commercial/Advertisement photography, sports photography, fashion photography, slow and fast moving objects, functions, machines and processes , landscape, architecture, night photography children, animal, birds, shooting spot etc. by digital camera. They will have the concept of audio video recording, mixing, editing, dubbing of sound, using different types of microphones. Shooting of different areas and topics such as sports, wildlife, modeling, drama, documentary, serial, story board making, news, interview, seminar/ workshop, industrial, live broadcasting, musical event, advertisement, etc. The trainee also undergoes two weeks on-the job training in various studios/labs at the end of the second semester which gives them more practical exposure to the professional working environment.

Skills Acquired:

Digital Photographer General; takes photograph of persons, places, or other subjects, using various kinds of photographic equipment. Measures day light using exposing meter or arranges artificial lighting and holds or places camera at desired angle and distance from subject to be photographed. Focuses lens and adjusts lens opening and exposure time. Loads camera with film or plate. Presses lever to open lens shutter and exposes film or plate by pressing lever, allowing time, if for publication. Supplies series of pictures on selected topics, for writing feature articles in magazines. May develop films and print copies. Photographers and Image and Sound Recording Equipment operators, Other take photographs of persons, places and objects and record sound for different purposes and include Photographers, Image and Sound Recording Equipment Operators not elsewhere classified.

Photographer News; or Press Photographer photographs news events, persons or objects for use in newspapers, magazines and other publications. Receives instructions from News Editor or Chief Reporter regarding nature of pictures to be taken. Travels to location; loads camera with film, waits for suitable moment and takes photographs. Attends State functions and parties and takes photographs of important persons arousing special interest of news value for publication. Accompanies important visitors and dignitaries and takes photographs of significant events associating important persons. Removes exposed film for developing and printing. Examines print, gives appropriate title or heading, and hands it over to News Editor.

Photographer, Aerial; photographs objects, places and areas of vital importance from aeroplanes in flight, for use in surveys, planning, development and other scientific and military purposes. Determines number of exposures and time lapse between them by making necessary calculations. Loads camera, adjusts exposure-time and exposes film by opening shutter at calculated intervals. Operates and maintains automatic camera and photo equipment for aerial photographs. Develops aerial films of various types in automatic, semi-automatic or manual tank developers. Makes prints for photo interpretation.

Digital photographic institutions; it will provide the familiarization with the institution, its importance of trade training & professional use of Digital camera into different types of uses into variety of interests of the Govt. and public sectors. After getting trained, the trainee will be able to do the job for making short documentary, news items, and interviews of great personalities of different areas, music videos and professional photography for wild life, modeling, drama documentary, serial, story board making news, live broadcasting, seminar/workshop industrial, musical event, advertisement as well as domestic purposes etc.

34. Welder (GMAW & GTAW) [Duration: 1 year (2 semesters of six months each)] NSQF level-3:**Course Content:**

Welder (GMAW & GTAW) while doing gas welding, fuses metal parts together using welding rod and oxygen acetylene flame. Examines parts to be welded, cleans portion to be joined, holds them together by some suitable device and if necessary makes narrow groove to direct flow of molten metal to strengthen joint. Selects correct type and size of welding rod, nozzle etc. and tests welding, torch. Wears dark glasses and other protective devices while welding. Releases and regulates valves of oxygen and acetylene cylinders to control their flow into torch. Ignites torch and regulates flame gradually. Guides flame along joint and heats it to melting point, simultaneously melting welding rod and spreading molten metal along joint shape, size etc. and rectifies defects if any.

Welder (GMAW & GTAW) while doing Arc welding, fuses metals using arcwelding power source and electrodes. Examines parts to be welded, cleans them and sets joints together with clamps or any other suitable device. Starts welding power source and regulates current according to material and thickness of welding. Connect one lead to part to be welded, selects required type of electrode and clamps other lead to electrode holder. May join parts first at various points for holding at specified angles, shape, form and dimension by tack welding. Establish arc between electrode and joint and maintain it throughout the length of the joint.

Welder (GMAW & GTAW) while doing gas cutting, cuts metal to require shape and size by gas flame either manually or by machine. Examines material to be cut and marks it according to instruction of specification. Makes necessary connections and fits required size of nozzle in welding torch. Releases and regulates flow of gas in nozzle, ignites and adjusts flame. Guides flame by hand or machine along cutting line at required speed and cuts metal to required size.

Welder (GMAW & GTAW) while doing Gas Tungsten Arc welding (GTAW) also known as Tungsten Inert Gas (TIG) welding reads fabrication drawing, examines parts to be welded, cleans them and sets joints with clamps or any other suitable device. Selects suitable tungsten electrode, grinds the edges and fit in to the GTA welding torch. Selects gas nozzle and fit in to the GTA welding torch. Selects suitable filler rods and cleans them. Connects work piece with earth cable, Connects the machine with Inert gas Cylinder, regulator and flow meter. Starts the Constant current GTA welding machine, sets suitable welding current & polarity and inert gas flow. Establish arc through across a column of highly ionized inert gas between work piece and

Tungsten electrode. Melts the metal and deposit weld beads on metal surfaces by passing the suitable filler rod in to the weld puddle. Joins Steel, Stainless steel & Aluminium sheets and Aluminium & SS tubes .

Welder (GMAW & GTAW) while doing Gas Metal Arc welding also known as MIG/MAG Welding, reads fabrication drawing, examines parts to be welded, cleans them and sets joints with clamps or any other suitable device. Connects work piece with earth cable. Connects the machine with suitable gas Cylinder, regulator and flow meter. Connects preheater when CO₂ is used as shielding gas. Selects suitable wire electrode, feed it to welding GMA Welding torch through wire feeder. Selects contact tip gas nozzle and fit in to the GMA welding torch. Preheats joints as required. Starts the Constant Voltage GMA welding machine, sets suitable welding voltage & wire feed speed and shielding gas flow, produces arc between work piece and continuously fed wire electrode. Melts the metal and deposit weld beads on the surface of metals or joins metal pieces such as Steel, Stainless steel and aluminium metals. Also will do mixed shielding gas welding. May experience with tubular wire welding called Flux Cored Arc Welding (FCAW). Plan and organize assigned work and detect & resolve issues during execution in his own work area within defined limit. Demonstrate possible solutions and agree tasks within the team. Communicate with required clarity and understand technical English. Sensitive to environment, self-learning and productivity.

Skills acquired:

Recognize & comply safe working practices, environment regulation and housekeeping. Work in a team, understand and practice soft skills, technical English to communicate with required clarity. Demonstrate knowledge of concept and principles of basic arithmetic & algebraic and apply knowledge of specific area to perform practical operations. Understand basic science in the field of study including basic electricity. Read and understand engineering drawing for different application in the field of work. Understand the concept in productivity, quality tools, and labour welfare legislation. Explain energy conservation, global warming and pollution. Explain time management, entrepreneurship and manage/organize related task in day to day work for personal & societal growth. Understand and apply basic computer working, basic operating system and uses internet services to get accustomed & take benefit of IT developments in the industry. Plan and organize the work in familiar predictable/routine environment for different types of welding and allied operations. Carry out routine jobs for setting the components for cutting, welding, brazing and allied operations. Explain working principle of welding to perform Arc welding and Gas welding, in different position. Demonstrate practical skills to cut/ fabricate components/ assemblies in different positions by different welding processes viz., Arc welding and Gas welding, with appropriate equipment/ consumables with close supervision. Explain working principle of Gas Metal Arc welding & Gas Tungsten arc welding with different metals. Demonstrate practical skills to cut/ fabricate components in different positions by Gas Metal Arc welding & Gas Tungsten arc welding, with appropriate equipment/ consumables with close supervision. Demonstrate Plasma cutting on ferrous nonferrous metals. Perform inspection/ testing of welded joint by visual inspection, Dye penetrate & Magnetic particle testing method.

35. Welder (Fabrication & Fitting) [Duration: 1 year (2 semesters of six months each)] NSQF level-3:

Course Content:

Recognize & comply safe working practices, environment regulation and housekeeping. Work in a team, understand and practice soft skills, technical English to communicate with required clarity. Demonstrate knowledge of concept and principles of basic arithmetic & algebraic and apply knowledge of specific area to perform practical operations. Understand basic science in the field of study including. Read and understand engineering drawing for different application in the field of work. Understand the concept in productivity, quality tools, and labour welfare legislation. Explain energy conservation, global warming and pollution. Explain time management, entrepreneurship and manage/organize related task in day to day work for personal & societal growth. Understand and apply basic computer working, basic operating system and uses internet services to get accustomed & take benefit of IT developments in the industry. Join MS sheet by Gas welding in different positions. Join MS plates by SMAW in different positions. Perform straight, bevel & circular cutting on MS plate by Oxy-acetylene cutting process. Perform different type of MS pipe joints by Gas welding (OAW). Weld different types of MS pipe joints on structural pipes by SMAW. Weld Stainless steel, Cast iron, Aluminium and Brass by OAW . Perform brazing on MS sheets. Perform Arc gauging on MS plat Perform linear and angular measurement and check surface level using specified gauges and carry out marking using marking block. Develop and make different Geometrical shapes. Study the design drawing related to structural and pressure parts and identify of metals, bars, plates, flats, channels, I section, T section, and box /hollow section etc for the purpose of fabricating structure. Mark, cut and bevel the parts and prepare edges by Oxy acetylene Gas cutting for fabrication of structures. Perform drilling machine operations to steel structures for fabrication of structures Mark and cut sheet metals to required size using guillotine shearing machine. Perform bending, straightening and edge planning for fabrication of structures. Make fit up and carry out tack welding to fabricate structures as per the standard tack welding procedure. Mark and prepare edges for different types of pipe joints viz T,Y&K joints and Tack welding Pipes. Mark and prepare riveted joints. Make templates for simple objects and fixtures. Perform Marking on Girder and

Trusses and make a simple lattice structure. Make pipeline Assembly, welded section and cylindrical Tanks by SMAW. Rectify distorted welded structure by flame straightening. Carry out dimensional inspection of fit ups. Perform Cleaning & Painting on fitted structures.

Skills acquired:

WELDER (Fabrication & Fitting) while gas welding, fuses metal parts viz., M.S, S.S, Brass & Aluminium sheets and Cast Iron plates together using welding rod and oxygen acetylene flame. Examines parts to be welded, cleans portion to be joined, holds them together by some suitable device and if necessary makes narrow groove to direct flow of molten metal to strengthen joint. Selects correct type and size of welding rod, fluxes nozzle etc. and tests welding, torch. Wears dark glasses and other protective devices while welding. Releases and regulates valves of oxygen and acetylene cylinders to control their flow into torch. Ignites torch and regulates flame gradually. Preheats joints as required. Applies flux as required for welding Aluminium and Cast Iron. Guides flame along joint and heats it to melting point, simultaneously melting welding rod and spreading molten metal along joint shape, size etc. Makes Square butt, lap, Tee, Corner and Single Vee but joints by Gas welding. Rectifies defects if any.

WELDER (Fabrication & Fitting) while gas cutting, cuts metal to required shape and size by gas flame either manually or by machine. Examines material to be cut and marks it according to instruction of specification. Makes necessary connections and fits required size of nozzle in welding torch. Releases and regulates flow of gas in nozzle, ignites and adjusts flame. Guides flame by hand or machine along cutting line at required speed and cuts metal to required size.

WELDER (Fabrication & Fitting) while gas brazing, joints metal parts by heating using flux and filler rods. Cleans and fastens parts to be joined face to face by wire brush. Apply flux on the joint and heats by Oxy acetylene welding torch to melt filler rods into joint. Allows it to cool down. Clean and examines the joint.

WELDER (Fabrication & Fitting) while Shielded Metal Arc welding (SMAW) on plates fuses metals using arc-welding power source and electrodes. Examines parts to be welded, cleans them and sets joints together with clamps or any other suitable device. Starts welding power source and regulates current according to material and thickness of welding. Connect one lead to part to be welded, selects required type of electrode and clamps other lead to electrode holder. May join parts first at various points for holding at specified angles, shape, form and dimension by tack welding. Establish arc between electrode and joint and maintain it throughout the length of the joint. . Makes Square butt, lap, Tee, Corner and Single Vee but joints by Shielded Metal Arc Welding. Rectifies defects if any by Arc gouging and re-welding.

WELDER (Fabrication & Fitting) while Fitting Structural assemblies fits together various parts of heavy structures such as bridges, overhead cranes, hoists, ship etc. in workshop according to drawings under instructions of structural Engineer, and dismantles them for transporting to site for final construction. Examines drawings and other specifications. Checks parts to be fitted together. Cuts steel plates and angle iron using power shear or flame cutting equipment. Drills holes for bolts and rivets. Aligns members in position with connecting pins to ensure that members fit together properly preparatory to permanent erection of structures at site. Checks alignment of members with spirit level, etc., to ensure accuracy of fit. Tack weld the assemblies. May bend or otherwise shape plates and assemble structural members by fitting, forging, drilling, riveting, bolting, or welding.

36.*Garment & Sales Assistant [(Duration: 1 year (2 semesters))] (*-subject to alignment with NSQF)

Course Content: Communication skill development, Billing and record keeping, Management principals, Fashion concepts and Marketing research Supply chain and logistics, Basic operating and functional behaviour of consumers Product detailing, Branding and labelling, Theme window display Product launching, Folding, casing, presentation, Colour scheme, Colour effects Knowledge of different varieties of beads, sequins, shells, pearls, and other ornamental materials used in garments and Sarees, Knowledge about importance of Bead work and ornamentation. Understanding of different traditional motifs, fabrics and threads. Different methods of ornamentation. Basic disciplines in the industry.

Skills Acquired: On completion of the course, the trainee will have Communication skill, and skills of fashion concepts, Marketing research, supply chain and logistics, basic operating and functional behaviour of consumers, product detailing, branding and labelling, theme window display product launching, folding, casing, presentation maintaining the records of receipts, productions and deliveries, and also cash transactions.

CENTER OF EXCELLENCE SCHEME (CoE) COURSES

37. Hospitality Management: Advanced Module: Food Production [(Duration: 6 months)]

Specialized Training in Food Production: To give advance knowledge in the fields of Hotel Management.

38. Hospitality Management: Advanced Module: Front Office Management[(Duration: 6 months)]

Specialized Training in Front Office: To give advance knowledge in the fields of Hotel Management.

39. Hospitality Management: Advanced Module: Food & Beverage Service[(Duration: 6 months)]

Specialized Training in Food & Beverage Service: To give advance knowledge in the fields of Hotel Management.

40. Hospitality Management: Advanced Module: House Keeping[(Duration: 6 months)]

Specialized Training in House Keeping: To give advance knowledge in the fields of Hotel Management.

4.1.1 Employment Opportunities:

Sr. No.	Trade	Employment options
1.	Computer Operator & Programming Assistant	Assistant programmer in software development firms; Faculty member or Lab Assistant in Computer Institutes or Schools; Internet Operator in Cyber Café; Computer operator in office/industry; Assistant to Service Engineers/Network technician; Sales person in Hardware & software firms etc. Options for self-employment/Entrepreneurship Development: Opening a Computer Institute, Cyber café & DTP center, Opening a Computer Consumable shop; Taking up data processing jobs.
2.	Information & Communication Technology System Maintenance	Computer System Maintenance Personnel; Supervisor in Electronic Assembly Units; Electronic Technician (Assembly, Test, Maintenance, Troubleshooting & Quality control); Communication & Office Equipment's Maintenance Personnel Options for self-employment / Entrepreneurship Development: On completion of the course the trainee can undertake repair of Computer Hardware peripherals & maintenance; Electronic & Electrical Maintenance & Repairs (Audio System, TVs, VCDs, Washing Machines, Microwave Ovens etc.); General Office & Communications Maintenance (Telephone, Fax, EPABX etc.); Setup & Maintain Cyber Café's Internet, E-mail & Allied Communications & Software Services (Browsing, Scanning, Printing, Computer Typing, Telephone, Fax, Xerox, Leasing of System & Projectors)
3.	Desk Top Publishing Operator	DTP Artist / Visualiser in Advertising Company; DTP Operator in Newspaper Publishing Industry, Print & Packaging Company; Prepress In-charge in Printing Industry, Service Bureau; Data Entry Operator in Office Administration, as a faculty in Computer Institutes and schools. Options for self-employment / Entrepreneurship Development: DTP Service Centre: Typesetting of various types of jobs, Photocopying, Lamination & Spiral binding; Commencing a Digital Printing, Offset & Screen Printing venture; Starting an Advertising Agency; undertake Newspaper advertisement & designing of numerous types of advertising materials; Freelancer: Graphic designing of promotional material for events & exhibitions.
4.	Fitter	Bench fitter in manufacturing industries; maintenance fitter in shipping industries and oil rigs; erection in various industries; fabricator for windows/shutter in small workshops; Stores clerk in an Engineering stores. Options for self-employment / Entrepreneurship Development: Can set up own workshop for fabrication and structural work such as grills, gates, steel; furniture and shutters; can carry out repairs and maintenance of domestic water pipe line individually; can manufacture cutlery such as chopper, knife, axe and chisel; can manufacture and repair locks and keys; can undertake repairs of machines.
5.	Turner	After completion of the trade course, the trainee can be employed as a skilled turner in various industries like MPT, Goa Shipyard, GAAL, ACGI, Chowgule Industries and small scale industries in different industrial estates in the state. Options for self-employment / Entrepreneurship Development: Trainee can start his own small scale Industry Manufacturing Unit for production of components like nut-blots, shafts, gears, pins, pulleys, crank shafts of various machine parts, cylinder boring and also undertake repair of all types of machinery.
6.	Machinist	There is lot of demand for machinist in major industries like Goa Shipyard, Mormugao Port Trust, A.C.G.L., GAAL and also various small scale industries which exist in various industrial estates. Options for self-employment / Entrepreneurship Development: Skilled Machinist can start his own workshop and can supply the products of various jobs to the auxiliary units as a sub-contractor.

Sr. No.	Trade	Employment options
7.	Electrician	<p>Huge job opportunities in electricity department, public sectors, private and Govt. industries in power generation, transmission, distribution stations and abroad job opportunities as electrician, lineman, service technician, lab technician, electrical supervisor, re-winder etc.</p> <p>Options for self-employment / Entrepreneurship Development: License certificate for self employment, wiring contractors, own shop for repairs of domestic appliances, motor rewinding, sale of electrical materials and appliances, set up own electrical workshop, undertake contract of installation of machinery, panel boards and bus bars in industries.</p>
8.	Instrument Mechanic	<p>On completion of course, the trainee shall be able to work as an Instrument Technician in various Industries like petrochemical, fertilizer, chemical, Pharmaceuticals, Power plants, Power stations, Water works, Beverages plants, food Industries, Sugar Industries, Electricity dept. meter mechanic, Defense/Air force, Confectioneries and Shipping etc.</p> <p>Option for Self-employment / Entrepreneurship Development: The trainee shall be able to setup his own shop to undertake calibration, maintenance and repair of Industrial instruments. They can also setup laboratories for calibration and validation and provide certification to Industries. Installation and commissioning of Process control systems/Instruments in Industry. They can take Annual maintenance contract for Automation systems such as DAS, SCADA and DCS etc.</p>
9.	Mechanic (Refrigeration & Air Conditioner)	<p>Work as Refrigeration and A/C Technician in Industries and factories like – Chemical, Pharmaceuticals and Beverage plants; Manufacturing units – Godrej, L.G., Blue Star, Voltas; Defense services – as Plant Operator/Mechanic.</p> <p>Options for self-employment / Entrepreneurship Development: The trainee can set up his own: S.S.I. unit – For Deep freezer, Bottle Cooler, Water Cooler; Repairing workshop – Refrigerator and a/c equipment; Ice manufacturing unit, Cold storage on rental basis, Ice-cream/cold drink house, Bottle Filling plant.</p>
10.	Electronics Mechanic	<p>Multi-National companies: As Service Engineer, Shop floor technician, and operator in maintenance section; Reputed Government Firms: Telephone Department, Railway Recruitment Board, All India Radio and Doordarshan.</p> <p>Options for self-employment / Entrepreneurship Development: Can start his own firm, where he can undertake repairs of television, video and audio CD players. Can take dealership of reputed electronic firm and start trading business. Can take Electronic Maintenance of various factories. Can start his/her own business in software such as printing, scanning, Internet etc.</p>
11.	Draughtsman (Mechanical)	<p>The trainees can work as a Draughtsman in almost all mechanical and automobile production industries where the designing and drawing departments are maintained; they can work as tracer in State and Central Govt. departments, supervisor in Small Scale industry. They can also work in Structural fabrication sectors like building bridges, roof structures, building and constructions. They can also work in service industries, road transportation and railways. They can also work in public sector industries like BHEL, BEML, NTPC, etc and private industries in India and abroad. They can work in Ship building and repair and also in defense organizations</p> <p>Options for self-employment are: Trainees can take contracts for drawing and tracing work from different industries; Trainee can start an AUTOCAD training center.</p>
12.	Draughtsman (Civil)	<p>Employment opportunities for trainee from this trade as Draftsman, Surveyor and Land Surveyor shall be available in Central & State Government Departments. in Railways, C.P.W.D. Military, TCP, P.D.A., P.W.D., HUDA, Housing Board, Land Survey and public health engineering department. Private sector opportunities shall be as Draftsman, Construction Supervisor with Architect, Civil Engineer, and Civil Contractor, Builders.</p> <p>Options for self-employment / Entrepreneurship Development: The Trainee shall be able to independently undertake planning, drawing, estimation & costing and supervision of civil construction work. He can set up his own office for above work and also to supply Civil Construction materials</p>

Sr. No.	Trade	Employment options
13.	Secretarial Practice (English)	<p>Trainees who have undergone training under Secretarial Practice trade have multiple job opportunities at par with Stenography trade in the offices of the Government, Judiciary, Legislatures, Public Sector Undertakings, along with trade, commerce and industry. A Matric (10th) or Intermediate (12th) Pass student can become a Stenographer Grade D, Assistant Sub Inspector (Steno) in various Police Departments, a LDC, Jr. Assistant or Head Constable (Ministerial) and Stenographer Grade C, or Personal Assistant (PA); a graduate with a speed of 100-120 w.p.m. can become Executive Assistant, Sr. Personal Assistant, Private Secretary, Vocational Teacher/Instructor, JTO, Training Officer, Assistant Director (Stenography) in Govt. Departments or a Sr. Stenographer, PS, Judgment Writer/Court Master in judiciary; a graduate with professional competence in Stenography can become Personal or Private Secretary to high executives in Multi-national Corporations, Public Sector Undertakings and Business Organizations with vast promotional avenues; a graduate with a speed of 140 w.p.m. can become Assembly Reporter through direct recruitment in State Legislatures and Parliamentary Reporter (Class I Gazetted) in both Houses of Parliament with a speed of 140-160 w.p.m. in Shorthand with promotional avenues as Dy. Director, Joint Director, Director and Joint Secretary through UPSC Exams.</p> <p>Options for self-employment / Entrepreneurship Development: A professional can get self-employment by setting up own commercial institution, call centre, contractual worker etc. even in the rural or remote areas.</p>
14.	Stenographer & Secretarial Assistant (English)	<p>Work in many settings such as Stenographer Secretary and Administrative Assistant, Except Legal, Medical, and Executive clerical and administrative functions such as drafting correspondence, scheduling appointments, organizing and maintaining paper and electronic files, or providing information to callers.</p> <p>Options for self-employment / Entrepreneurship Development: A professional can get self-employment by setting up own commercial institution, call centre, contractual worker etc.</p>
15.	Mechanic Motor Vehicle	<p>Work as a Mechanic in reputed workshop/service center; Work as a Driver.</p> <p>Options for self-employment / Entrepreneurship Development: Start his own workshop/ Service Station, Spare Parts Shop, Tyre, Tube repair shop, Battery repair shop. Can work as an Auto Electrician</p>
16.	Basic Cosmetology	<p>Beautician in the Beauty Parlours in India and abroad; Beauticians or Hairdresser in the Film Industry Instructors in the gymnasium and Health fitness center/club; Councilor on Beauty Care.</p> <p>Options for self-employment / Entrepreneurship Development: The trainee can set up a Beauty Parlour. Offer Hair & Skin treatment, Bridal makeup and dressing at home, Mehendi designing and preparation of herbal cosmetic products. Organize fashion shows.</p>
17.	Food Production (General)	<p>Hotels, Motels Resorts Airlines Travels Agencies, Catering Companies, Clubs, Cruise Ships, Bars, Fast Food, Casinos, etc.</p> <p>Option for self-employment are: They can start their own restaurant and catering establishment.</p>
18.	Food And Beverages Guest Services Assistant	<p>: Hotels, Motels Resorts Airlines Travels Agencies, Catering Companies, Clubs, Cruise Ships, Bars, Fast Food, Casinos, Etc.</p> <p>Options for self-employment / Entrepreneurship Development: They can start their own restaurant, bar and catering establishment.</p>
19.	Mechanic Diesel	<p>Work as a Mechanic in reputed workshop/Service Centre; Work as a Driver.</p> <p>Options for self-employment / Entrepreneurship Development: Start his own workshop, Service Station, Spare Parts Shop; Tyre, Tube repair shop, Battery repair shop; Can work as an Auto Electrician.</p>
20.	Welder	<p>Electric arc welder; Gas Welder; CO2 MIG Welder; TIG welder; Gas Cutter; TIG/MIG welder; Pipe welder.</p> <p>Options for self-employment / Entrepreneurship Development: Can setup own fabrication workshop, Steel furniture workshop.</p>
21.	Carpenter	Wood Craft Technician in any woodwork Industries or in any Government

Sr. No.	Trade	Employment options
		<p>department for one/two years and can get a job in PWD, MPT, Military, Nehru Science Centre, Zuari furniture, Gautier furniture etc.</p> <p>Options for self-employment / Entrepreneurship Development: They can earn more by starting a small carpentry workshop. It is a highly valuable way of earning by manufacturing different types of furniture and also giving employment to those who are unemployed skilled workers.</p>
22.	Wireman	<p>Huge job opportunities in electricity department, public sectors, private and Govt. industries, in power generation, transmission, distribution stations as wireman, lineman, service technician, lab technician, wireman supervisor, etc.</p> <p>Options for self-employment / Entrepreneurship Development: License certificate for self employment, wiring contractors, own shop for repairs of domestic appliances, sale of electrical materials and appliances, set up own electrical workshop, undertake contract of installation of machinery, panel boards and bus bars in industries</p>
23.	Plumber	<p>Plumber in Government departments/PWD, Star hotels, Industries, etc.; Pump Operator, Plumbing Supervisor and Pipe Fitter in Ship industries and oil refineries.</p> <p>Options for self-employment Options for self-employment / Entrepreneurship Development: Plumbing contract for domestic and industries; Establish Hardware shop; Maintenance contracts of domestic lines and industrial lines.</p>
24.	Sewing Technology	<p>The trainee can be employed as an assistant to a designer, an operator or supervisor in garment industry or get employed in tailoring industry / shops, hospitals, jails, defence forces and in the film industry.</p> <p>Options for self-employment / Entrepreneurship Development: The trainee can set up his / her own tailoring shop for stitching ladies and gents garments. He / She can also setup a manufacturing unit of readymade garments with the help of various Government Schemes.</p>
25.	Computer Hardware & Network Maintenance	<p>Technician for maintenance & servicing of different hardware and networking equipments, Assistant to System & Network Engineer, Supervisor in hardware assembly units, Sales person in hardware & networking, Faculty members or Lab Assistant in Computer Institute.</p> <p>Options for self-employment / Entrepreneurship Development: To start a business in sales, service and maintenance of computer hardware, software and networking. To start a Computer Institute, setup and maintain a cyber cafe.</p>
26.	Attendant Operator (Chemical Plant) (AOCP)	<p>All Chemical, Fertilizer, Pharmaceutical and Petroleum (Oil and Gas) and Power Plants (Water treatment) will be able to recruit these trainees.</p>
27.	Multimedia, Animation & Special Effects	<p>Work with of Newspaper/Advertising agencies and News Channels. Work with Event management companies.</p> <p>Options for self-employment / Entrepreneurship Development: Start own business doing News Reporting/Writing and Editing, Operate Lighting and Sound consoles, Operate Digital Still and Movie Cameras, Carry out Audio/Video recording and editing, Make Audio and Video CD's, Films etc.</p>
28.	Garment & Sales Assistant	<p>Work as an Assistant in Sales in any garment show room / Mall etc.</p> <p>Options for self-employment / Entrepreneurship Development: Start own business doing bead work using different types of beads, making regional embroideries from all over India, creating tie & dye on fabrics, taking marriage dresses orders.</p>
29.	Solar Technician	<p>Work with any companies using renewable energy systems.</p> <p>Options for self-employment / Entrepreneurship Development: Install, operate and maintain solar photo voltaic energy systems. Install, operate and maintain solar thermal energy systems. Operate and maintain wind energy systems, Install and maintain solar fencing, bio mass system.</p>
30.	Hospitality Management: Advanced Module: Food Production	<p>Option for Employment: Excellent opportunities in the Hotel Industry, Fast Foods, Air Lines, Cruise Liners, Tourism, etc.</p> <p>Options for self-employment / Entrepreneurship Development: To start own business such as restaurant, Bar, Catering Establishment, Catering for Wedding parties, Other domestic ceremonies, office meeting & conference, etc.</p>

Sr. No.	Trade	Employment options
31.	Hospitality Management: Advanced Module: Front Office Management	Option for Employment: Excellent opportunities in the Hotel Industry and Tourism, etc. Options for self-employment / Entrepreneurship Development: To start own business such as restaurant, Bar, Catering Establishment, etc.
32.	Hospitality Management: Advanced Module: Food & Beverage Service	Option for Employment: Excellent opportunities in the Hotel Industry, Fast Foods, Air Lines, Cruise Liners, Tourism, etc. Options for self-employment / Entrepreneurship Development: To start own business such as restaurant, Bar, Catering Establishment, Catering for wedding parties, Other domestic ceremonies, office meetings & conferences, etc.
33.	Hospitality Management: Advanced Module: House Keeping	Option for Employment: Excellent opportunities in the Hotel Industry, Cruise Liners, Tourism, etc.
34.	House Keeper	Excellent opportunities in the Hotel Industry, Cruise Liners, Tourism, etc. Options for self-employment / Entrepreneurship Development: To start own business / agency related to cleanliness and provide services to restaurant, Bar, Catering Establishment, wedding parties, Other domestic ceremonies, office & conferences, etc.
35.	Front Office Assistant	Excellent opportunities in the Hotel Industry and Tourism, etc. Options for self-employment / Entrepreneurship Development: To start own business such as restaurant, Bar, Catering Establishment, etc.
36.	Travel & Tour Assistant	Excellent opportunities in the tourism industry and Hotel industry etc. Options for self-employment / Entrepreneurship Development: To start own business/ agency in tourism, conduct tours, etc.
37.	Driver Cum Mechanic	He can work as a driver in any workshop, factory or in service centre. Options for self-employment / Entrepreneurship Development: Can start taxi business; giving Vehicle on hire business; Setting up own workshop, private service centre, driving school.
38.	Digital Photographer	Work with of Newspaper/Advertising agencies and News Channels. Work with Event management companies, photography studios, Options for self-employment / Entrepreneurship Development: Start own business doing News Reporting/Writing and Editing, , photography for various occasions like weddings, birthdays, seminars, parties Operate Digital Still and Movie Cameras, Carry out Audio/Video recording and editing, Make Audio and Video CD's, Films etc.
39.	Welder (GMAW & GTAW)	Electric arc welder; Gas Welder; CO2 MIG Welder; TIG welder; Gas Cutter; TIG/MIG welder; Pipe welder. Options for self-employment / Entrepreneurship Development: Can setup own fabrication workshop, Steel furniture workshop.
40.	Welder (Fabrication & Fitting)	Electric arc welder; Gas Welder; CO2 MIG Welder; TIG welder; Gas Cutter; TIG/MIG welder; Pipe welder. Options for self-employment / Entrepreneurship Development: Can setup own fabrication workshop, Steel furniture workshop.

4.2 Subjects to be studied during the Course of Training:

Craftsmen Training Scheme (Semester Pattern)	
Engineering Trades	Non – Engineering Trades
1. Trade Theory 2. Trade Practical 3. Workshop Calculation & Science 4. Engineering Drawing (Except for D'Man Mech. & D'Man Civil trades)	1. Trade Theory 2. Trade Practical 3. Employability Skills 4. IT Literacy * 5. Additional subject related to the trade

5. Employability Skills 6. IT Literacy*	
Center of Excellence (Modular Pattern)	
Advanced Module	
(1). Trade Theory (2). Trade Practical	
Specialized training to be undertaken in the industry on completion of training under Advanced Module.	
*Subject to MSDE Norms	

4.3 Key Skill Development Training Schemes available/offered by ITIs:

4.3.1 Craftsmen Training Scheme: Industrial Training Institutes (ITI) have been set up under the Craftsmen Training Scheme (CTS) with an objective to ensure steady flow of skilled personnel to the public and private sectors, and to reduce unemployment amongst the educated youth by equipping them with required skills, education and discipline.

There are 10 Govt. and 6 Pvt. ITIs in the State of Goa imparting training in various Engineering and Non-engineering trade courses. Most of the trades and units available in these Institutes are affiliated to the National Council for Vocational Training (NCVT), New Delhi through Directorate General of Training (DGT), Ministry of Skill Development and Entrepreneurship (MSDE), Government of India, New Delhi and training is imparted as per the syllabus and curriculum approved by Government of India in consultation with NCVT. However, some of the trades/units in these it is are affiliated to State Council for Vocational Training (SCVT), Panaji-Goa.

4.3.2 Centre of Excellence (CoE) Scheme under Vocational Training Improvement Project (VTIP) : This is a externally Aided project for Reforms and Improvement under Vocational Training Service rendered by the Central and State Government. The objective of the scheme to develop Govt ITIs into Centre of excellence (CoE) and to produce multi-skilled workforce matching world standards. The main thrust of the program is to provide appropriate infrastructure, equipment, update syllabi and introduce new courses in the ITIs. The scheme was launched in the year 2007 with fund allotment for Institute Development (IDP), Management Information System and additional components for development. Seven Government ITIs have been upgraded under VTIP scheme with World Bank assistance.

4.3.3 Scheme of "UPGRADATION OF 1396 GOVERNMENT ITIS THROUGH PPP": The objective of the Scheme is to improve the quality of vocational training in the country and make it demand driven so as to ensure better employability of the graduates. The Vasco Govt ITI is being upgraded under this scheme. The institute Management Committee (IMC), headed by the Industry Partner, constituted and registered as a Society, leads the process of Upgradation.

4.3.4 National Apprenticeship Promotion Scheme (NAPS): The main objective of the scheme is to promote apprenticeship training and to increase the engagement of apprentices from present 2.3 lakh to 50 lakh cumulatively by 2020 by :

- 1) Sharing of stipend with employers to a maximum limit of Rs.1,500/- per month per eligible Apprentice;
- 2) Sharing of Basic Training Cost with Basic Training Providers to a maximum one-time limit of Rs.7,500 /- for 500 hours / 3 months per eligible trainee.

4.3.5 UPGRADATION OF EXISTING GOVERNMENT ITIs INTO MODEL ITI: The Key objective of this Govt of India scheme is to develop a benchmark for industry oriented ITI which would serve as a model for other ITIs and would also raise dignity of ITI education. Gol has allocated an amount of Rs. 5.00 crore with 70:30 sharing pattern.

Target Fixed: As per Institute Development Plan under the Scheme, it is proposed to

- 1) Revamp the trade courses offered at the ITI
- 2) Undertake Civil works to accommodate the proposed new courses.
- 3) Strengthening / Establishment of Training cum Placement Centre.

4.3.6 Skill Strengthening for Industrial Value Enhancement (STRIVE) : This project is a World Bank Assisted Government of India program with the objective of improving the relevance and efficiency of skill training provided through ITI's and apprenticeships and is 100% funded Gol Project.

STRIVE is five year program implemented by the ministry of Skill Development & Entrepreneurship from the year 2019 onwards through State Governments, Industrial training (ITI), Centrally Funded Institutes (CFIs) and Industry Clusters (ICs). STRIVE also supports two sub-missions of the national Skill Development Mission (NSDM), namely: (i) institutional training, and (ii) trainers.

4.3.7 Dual System of Training (DST): Objective of DST scheme is to enable industries and establishments to partner with Government and Private ITIs for conducting training programmes under high employability courses so as to fulfil their skilled manpower requirements.

The DST is an amalgamation of theoretical training imparted through ITIs and practical training imparted through the Industry. DST helps enable Industry linkages and provide hands on experience to students on industries latest/ updated technologies. Under the DST scheme, the courses are conducted to meet the skilled workforce requirements of Industry so that after completion of training, the trainee who are awarded National Trade Certificate (NTC) under the scheme have an edge over regular ITI pass outs in terms of employability and employment opportunities in Industry.

With the vision of strengthening Industry linkages and acquainting students in ITIs with latest technologies used in the Industry, the DST program ensures that the ITI trainees are Industry ready.

4.3.8 Pradhan Mantri Kaushal Vikas Yojana (PMKVY)

Pradhan Mantri Kaushal Vikas Yojana (PMKVY) is the flagship scheme of the Ministry of Skill Development & Entrepreneurship (MSDE). The objective of this Skill Certification Scheme is to enable a large number of Indian youth to take up industry-relevant skill training that will help them in securing a better livelihood.

4.4. All Goa Inter ITI Sports Meet:

All Goa Inter ITI Sports Meet is organized every year in various disciplines such as cricket, football, volleyball, badminton, and athletics (relay, shot put, discus throw) to be participated by the trainees of the Government as well as the private ITIs. All these ITIs are grouped into two zones viz. North and South, and the finals are played between the winners of the two zones on the final day of the meet.

Trophies are awarded to the winning team of each event and a 'Certificate of Participation' is awarded to individual participant of the winning teams. Apart from this, 'Director's Trophy' is awarded to the Institute displaying good discipline, sportsmanship, and winning maximum events.

5. EXAMINATIONS:

5.1. Online / Online Examination System

➤ This Department, with consultation of the Central Ministry, is in process of implementation of an Online Examination System for the Academic year 2019-20. Once the same is finalized, the detailed 'online' admission-procedure will be informed to the Government / Private ITIs, accordingly.

Note: In case the 'Online' Examination mode is implemented by the State, the same shall replace the existing mode of conducting the ITI Examinations.

5.2. Annual Exams

Annual exams would be conducted for the trainees under the aegis of NCVT/SCVT for all CTS trades admitted from the session July 2019 onwards and their first annual exam would be conducted in the month of June/July after completing the training as per syllabus of both Semester-I & II combined. Similarly, second annual exam would be conducted in the month of June/July after completing the training as per syllabus of both Semester-III & IV combined. Trainees of two years duration trades will attempt 02 annual exams. Trainees may be allowed to appear in AITT for total 04 attempts i.e. 01 attempt as Regular and 03 additional attempts as supplementary to pass the AITT. Supplementary exam will be held every 6 months or even 3 months. If a trainee does not appear in any one or none of the 1+3 additional attempts as supplementary, the trainee will lose that attempt and registration will expire. The registration of trainee will expire after 1+3 additional attempts as supplementary or completion of period of one and half year (1½) after training whichever is earlier. If a trainee does not successfully pass the AITT in this period, the name of the trainee will be struck-off from portal. For CTS, candidate may apply as a private candidate after 03 year industrial experience to appear in AITT or may again seek fresh entry as regular.

Examinations would be conducted at the end of the six months training for the trainees undergoing training in Advanced Module after which they would require to undergo Specialized Module training in the industry for the remaining six months where he/she would be assessed for issue of a certificate at the end of the course which would be recognized by SCVT.

The All India Trade Test (AITT) examination pattern will be followed for the trades under SCVT.

All the examinations would be conducted as per the norms applicable, as may be revised from time-to-time.

5.3 Internal Exams

Internal monthly exams would be conducted in each semester for trades under CTS and Advanced Modules under CoE. Marks scored in above exams would be considered for award of sessional marks.

5.4 Scholarships:

The trainees of the Government ITIs are awarded the following scholarships:

A. Merit scholarships at the rate of Rs. 250/- per month per trainee will be awarded to 40% of the sanctioned strength in each trade at every ITI on the basis of:

I) The marks scored for internal test.

II) Assessment of the sessional work, discipline and punctuality three months after admissions. If the number of trainees in any unit is less than the number of sanctioned seats, the merit scholarships shall be awarded in proportionate number.

B. Below Poverty Line (BPL) Scholarship at the rate of Rs. 250/- per month is awarded to the trainees belonging to BPL, SC/ST categories and to the trainees whose family's annual income is less than Rs. 3,00,000/- on the production of an income certificate issued by (1) The concerned village Panchayat Secretary under the respective Panchayat area duly attested by the Sarpanch of the concerned village Panchayat or (2) Chief officers of the respective municipal council to the residents under their respective municipal council area or (3) by the Mamlatdar of the concerned Taluka or (4) The District Collector/Magistrate.

RECOVERY OF AWARDS OF BELOW POVERTY LINE SCHOLARSHIP:-

(i) The Below Poverty Line scholarship is liable to be cancelled for acts of indiscipline or for conduct unbecoming of the trainee of ITI. Director shall be the deciding authority.

(ii) The trainee shall be liable to refund the amount of Below Poverty Line scholarship if he/she discontinues the training during the course of the year for which the scholarship is awarded without valid reason.

Scholarships are awarded to the ITI trainees by the Department of Social Welfare in the form of Freeships/Scholarships to certain categories of candidates.

Scholarships are also awarded by the Education Department to the ITI trainees whose parents are teachers.

C. The trainees of the **Private ITIs** are awarded the following scholarships: Sesa Private ITI awards merit scholarship to deserving trainees based on merit as well as on financial status of the family.

D. Apart from this, the trainees belonging to certain categories admitted in all the Private ITIs are eligible to receive the scholarship offered by the Department of Social Welfare.

5.5 National Trade Certificate (NTC):

5.5.1 CTS Trades:

On completion of the prescribed period of training annually, a trainee would have to undergo trade-testing based on the syllabi of corresponding semester. A mark-sheet would be issued on completion of each annual exam to successful trainees and on completion of entire course, successful trainees shall be awarded National Trade Certificate.

The NCVT registered trainees can access their academic progress online on Management Information System (NCVT MIS for annual system) public portal using his personal credentials for logging on the MIS portal and can download their marksheet and trade certificate directly from NCVT MIS portal www.ncvtmis.gov.in which could also be verified online. The same is authentic document and is valid for submission for employment, admission, Availing loan under MUDRA scheme, etc.

5.5.2. SCVT Trades:

A trainee admitted under SCVT would have to undergo examinations under SCVT. For the trades and units run under the SCVT, examinations and certification as per prevailing rules would be applicable. However, the exam will be conducted by the State Board of Examinations and the certificates would be issued by the SCVT.

5.6 Skill Competitions for Meritorious Craftsmen:

The topper trainees having scored more than 70 % marks in each of the trades from each ITI are eligible to compete at the "All Goa Skill Competition of Craftsmen" organized by the state. The toppers of these competitions are felicitated and awarded merit certificates at a state level function. However, the toppers of the following fourteen trade courses: Fitter, Turner, Machinist, Electrician, Electronics Mechanic, Instrument Mechanic, Welder, Mechanic Motor Vehicle, Sewing Technology, Mechanic Diesel Engine, Computer Operator & Programming Assistant, Draughtsman Mechanical, Civil Draughtsman and Mechanic Refrigeration & Air Conditioning are eligible to appear for "All India Skill Competitions of Craftsmen" conducted by the Government of India, Ministry of Skill Development & Entrepreneurship, DGT, New Delhi at various Advanced Training Institutes located at the major cities in the country which helps the trainees display their vocational skills at National level. A merit certificate is awarded to the best trainee in each trade at the State Level Skill Competition and a merit certificate and cash prize of Rs.50,000/- is awarded to the best trainee in each of the fourteen trades at the All India Skill Competition.

5.7 Private Candidates related Guidelines

5.7.1. Category-wise eligibility-criteria for any Applicants, who have not received a formal institutionalized skill training under the CTS scheme, to directly enroll and to appear as 'Private Candidate' in AITT under CTS, for award of NTC, has been listed below:

Category I: Ex-trainees (successful pass-outs) of ITI

A. Ex-trainees of ITI who already possess NTC in one of the trades under CTS, are eligible for applying as Private candidate for an allied trade, provided he/ she fulfils all the conditions regarding educational qualification etc. prescribed for that allied trade. (Refer <https://www.ncvtmis.gov.in> for list of allied trades)

B. In addition, the applicant should possess minimum of 1 year experience (as on date of submission of application) post the date of AITT result declaration in the desired allied trade in establishments implementing Apprenticeship Training Scheme (ATS)/establishments registered under the Apprenticeship

portal or registered MSMEs or Entities registered with any government/local authorities / shops covered under Factories Act 1948 and Shops and Establishments Act applicable for the concerned State.

Category II: 'Ex-trainees (successful pass-outs) and current trainees under CoE scheme

A. The applicant should have the minimum prescribed entry qualification and should fulfill eligibility criteria for the desired trade under CTS, in which he/she intends to appear for AITT as Private Candidate. Mapping of CoE trades, with that of regular CTS trades is provided on <https://www.ncvtmis.gov.in>. CoE candidates must register as 'Private Candidate' under CTS in the relevant/mapped CTS trade only.

B. There should be a minimum gap of 1 year between successful completion of CoE training i.e. from the date of result declaration to the date of submission of application for 'Private Candidate' certification.

C. During this gap of 1 year, the candidate must have undergone Industry training or gained experience in desired trade in establishments implementing Apprenticeship Training Scheme (ATS)/ establishments registered under the Apprenticeship portal or registered MSMEs or Entities registered with any government/local authorities / shops covered under Factories Act 1948 and Shops and Establishments Act applicable for the concerned State.

Category III: SCVT Candidates (admitted till August 2018 session)

A. No special provisions have been made for SCVT Trainees to enroll as 'Private Candidate'. Going forward, SCVT trainees have been granted equivalence vide G.S.R 186(E) dated 2nd March 2017 for undergoing apprenticeship training under the Apprentices Act 1961 to obtain 'NAC'.

B. Only for SCVT trainees admitted till August 2018 batch, provision has been made for obtaining NTC by appearing in AITT under 'Private Candidate'. Such trainees will continue to be governed by old guidelines for 'Private Candidate'.

Category IV: Other Candidates (candidate not falling in any of the above 3 categories, including SCVT trainees enrolled from admission session 2019 onwards)

A. The applicant should have the minimum prescribed entry qualification and should fulfill eligibility criteria for the relevant trade under CTS, in which he/she desires to appear for AITT as Private Candidate.

B. Applicant should be minimum 21 years of age on the date of submission of application. There is no upper age limit.

C. The applicant should possess minimum of 3 years' experience (on the date of submission of application) in the relevant trade in establishments implementing Apprenticeship Training Scheme (ATS)/ establishments registered under the Apprenticeship portal or registered MSMEs or Entities registered with any government/local authorities / shops covered under Factories Act 1948 and Shops and Establishments Act applicable for the concerned State.

D. SCVT trainees enrolled from admission session 2019 and onwards may appear as 'Private Candidate' under this category, i.e. Category IV, for obtaining NTC.

5.7.2. Eligibility Criteria and instructions for ITIs admitting Private Candidates

I. Only Government ITIs with grading of 2.0 and above are eligible to admit candidates as 'Private Candidate'.

II. The ITI should have affiliation in the relevant trade under which it intends to admit Private Candidate for appearing in AITT.

III. ITIs should have regular CTS trainees admitted in the affiliated trade i.e. the trade in which they intend to admit Private Candidate, for the current as well as previous year (ITI with vacant unit in current or previous batch shall not be considered).

IV. The ITI can admit Private Candidates in a particular trade in specified proportion to the total number of regular trainees admitted in the concerned trade for the academic session.

V. The upper limit of candidates to be enrolled by eligible ITIs as 'Private Candidate' under Category I, Category III and Category IV as defined in section 4 will be a maximum of 10% of their total seating capacity. The private candidates admitted under category II, as defined in section 4 shall be exempted from the applicable 10% cap.

For more details, you may kindly visit/download the related guidelines at: <https://ncvtmis.gov.in>

6. POST ITI OPPORTUNITIES

6.1. Direct Admissions to Second Year in Polytechnic Institutes

Government of Goa has provided vertical mobility to the ITI passed candidates in pursuing their studies in the various fields corresponding to their trades through the seats remaining vacant in the Polytechnics in the state provided the trainees have passed the qualifying examination of two year trade courses i.e. ITI certificate after passing S.S.C from Industrial Training Institute in Goa under the Directorate of Skill Development & Entrepreneurship as per the criteria specified in the Prospectus of Directorate of Technical Education for admission to Polytechnic. The details of seat allotted for ITI trainees are given below:

List of ITI trades recognized for eligibility to Diploma courses (Direct Second year)

Sr. No.	ITI Courses	Diploma Courses	Total Seats Allotted for ITI trainees
1.	Information & Communication Technology System Maintenance, System maintenance, Mechanic R&TV, Medical Electronics, Electronic Mechanic, Instrument Mechanic, Electrician, Course under Centre of Excellence** (2years): Information Technology, Multiskilled Course in Electrical and Electronics***, Electrical Sector	Electrical & Electronics Engg.	1
		Computer Engineering	3
		Electronics Engineering	2
		Electronics & Communication	3
		Electrical Engineering	2
2.	Fitter, Turner, Machinist, RAC Mechanic, Mechanic (Motor vehicle) Draughtsman (Mechanical)*, Production & Manufacturing (2years) Course under Centre of Excellence*, Diploma in Multiskilled Industrial Technology (Mechanical) under S.C.V.T* Course under Centre of Excellence*(2years): Fabrication(Fitting & Welding)*, Automobile Sector	Automobile Engineering	1
		Mechanical Engineering	5
		Shipbuilding Engg.	1
		Fabrication Technology & Erection Engg.	1
3.	Draughtsman Civil	Civil Engineering	5
		Architecture Engg.	1
4.	Hospitality Management (2years) Course under Centre of Excellence	Hotel Management & Catering Technology.	6
TOTAL			31

* To be considered only for Diploma in Mechanical Engineering.

** Eligible for Diploma in Electronics & Communication only.

*** Eligible for Diploma in Electrical Engineering /Electrical & Electronics Engineering.

The eligible candidates should report to the Directorate of Technical Education, Porvorim and the Principals of the respective Polytechnics in the State for more information.

6.2. Training at National Skill Training Institute (Formerly Advanced/Craftsmen Training Institutes):

The candidates can specialize in various advanced industrial skills in NSTI located in the major cities of the country and functioning under Government of India. The Recognition of Prior Learning (RPL) mode is also available for the candidates for online mode. For more information in this regard can be obtained from the Training cum Placement section at the Head Office of DSDE.

6.3. Apprenticeship Training in Specified Industries:**Conduct of Apprenticeship Training Programs in Specified Industries/Establishments, under the Apprentices Act 1961:**

Trainees from Industrial Training Institutes, on completion of their respective National/State Council of Vocational Training (NCVT/SCVT) affiliated Trade courses, are eligible to be engaged as Apprentices, to undergo Designated/Optional Apprenticeship Trade-Training, offered by various Establishments covered under the Apprentices Act, 1961 on their shop-floor.

Such trainees are eligible to also avail of training-period rebate corresponding to the period spent while training in the Industrial Training Institutes and are required to undergo training, in the Establishments specified, only for the remaining Apprenticeship Training period in the corresponding Trade.

Trainees, so engaged as Trade Apprentices in the Establishments, are eligible to be paid a minimum monthly stipend, as per below-detailed guidelines notified by the Government of India:

(a) During the first year of Apprenticeship Training: Seventy percent of minimum wage payable to a semi-skilled worker of the concerned Trade, as notified by the respective State;

(b) During the second year of Apprenticeship Training: Eighty percent of minimum wage payable to a semi-skilled worker of the concerned Trade, as notified by the respective State;

(c) During the third year of Apprenticeship Training: Ninety percent of minimum wage payable to a semi-skilled worker of the concerned Trade, as notified by the respective State;

Although, as per above guidelines, the average rate of monthly stipend payable to an Apprentice works out to Rs.8,611/-, some Private Sector Establishments are already paying stipend, ranging from Rs.10,000/- to Rs. 12,000/- per month.

As an added incentive, a Scheme for Employment Assurance through Skill (SEATS), under which, the remaining component of the above cited stipend, ie: 30%, 20% and 10% of the minimum wage payable for a semi-skilled worker of that Designated Trade, in the first, second and third years of Apprenticeship Training respectively, would be reimbursed by the State Government, is also under active consideration for final approvals of the Competent Authorities.

Further, to attract more number of potential Apprentices to take up industrial shop-floor training on a larger scale, the Government of India has also introduced the National Apprenticeship Promotion Scheme (NAPS), which offers financial benefits to eligible Establishments towards subsidizing stipend paid to their Apprentice/s,, as detailed here-below:

- Sharing of stipend with Establishments to a maximum limit of Rs.1,500/- per Month, per eligible Apprentice;
- Sharing of Basic Training Cost with Establishments duly registered/approved as Basic Training Providers to a maximum one-time limit of Rs.7,500 /-, for 500 hours / 3 months training conducted per eligible Apprentice.

Eligibility and Requirements for Apprentices:

Category of Apprentice	Minimum Age (Years)	Maximum Age (Years)	Minimum Educational Qualification	Aadhar Number	Aadhar linked Bank Account
ITI Pass Out	14	Not Applicable	As per Trade	Mandatory	Mandatory
Dual -Mode Trainee of ITI	14	Not Applicable	As per Trade	Mandatory	Mandatory
PMKVY/MES Pass Out	14	Not Applicable	As per Trade	Mandatory	Mandatory
Fresher	14	21	As per Trade	Mandatory	Mandatory

Eligibility and Requirements for Employers:

1. Employer validation through TIN/TAN and EPFO/ESIC/LIN/ any other identifier decided by the Government;
2. Aadhaar-linked Bank Account .

Eligibility and Requirements for Basic Training Providers (BTPs):

1. Government and Private ITI having spare seats (with in overall sanctioned seats);
2. Establishments with in-house basic training facilities.

For more details, interested Candidates may see the NAPS-Guidelines in the 'NAPS' or 'News & Updates' Links available on the <http://www.apprenticeship.gov.in> National Portal of the Central Government.

6.4 Academic Equivalence to ITI Courses

A. The Goa Board of Secondary & Higher secondary Education in its meeting held on 23/03/2016 has resolved to grant academic equivalence to ITI's NCVT/SCVT courses subject to the following conditions:

(1) Those students who after passing Std VIII have completed a ITI course of 2 years duration from a recognized center and passed NCVT/SCVT examination with prescribed syllabus and on their own volition have appeared and passed the examination conducted by the Goa Board of Secondary and Higher Secondary education in the subjects: 1) Language –I 2) Language –II/ Language-III prescribed by the Goa Board shall be considered equivalent to have passed SSC Examination.

Students who complete a recognized a ITI course of one year duration and complete one year apprenticeship training or certified employment will also be extended the same facility.

(2) Those students who after passing Std X have completed a ITI course of two years duration from a recognized center and passed NCVT/SCVT examination will prescribed syllabus and on their own volition, have appeared and passed the examination conducted by the Goa Board of Secondary and Higher Secondary Education in the subjects 1) Language I/ Communication Skill in English 2) Language-II prescribed by the Goa Board shall be considered equivalent to have passed H.S.S.C examination.

For the above purpose the candidates have to register themselves as private candidate offering isolated subjects, who have passed SSC and completed ITI fulfilling other conditions as laid down at(2) above.

B. The Goa University grants vertical mobility to the Vocational Students of Goa Board and the same facility is extended to the students of ITIs. The Academic Council of Goa university at its recent meeting resolved to permit mobility to students who, after passing Std X, having completed the ITI Courses of two years duration which have Std X as the eligibility from recognized centers and pass the National/State Council of Vocational Training (NCVT/SCVT) examinations of prescribed syllabus and on their own volition have appeared and passed the examination conducted by the Goa Board of Secondary and Higher Secondary Examination in the Subjects of English/Communication Skills for Std XII prescribed by the Goa Board.

The Eligibility for joining a particular program however would be decided based on earlier Circulars issued on the subject matter.

For details on Academic Equivalence to ITI courses contact nearest Govt. ITI or the Head Office.

6.5 Availability of 'Entrepreneurship' Schemes (MUDRA, NIESBUD, Etc.)

6.5.1 Pradhan Mantri MUDRA Yojana (PMMY) is a scheme launched by the Hon'ble Prime Minister on April 8, 2015 for providing loans upto 10 lakh to the non-corporate, non-farm small/micro enterprises. These loans are classified as MUDRA loans under PMMY. These loans are given by Commercial Banks, RRBs, Small Finance Banks, Cooperative Banks, MFIs and NBFCs. The borrower can approach any of the lending institutions mentioned above or can apply online through this portal. Under the aegis of PMMY, MUDRA has created three products namely 'Shishu', 'Kishore' and 'Tarun' to signify the stage of growth / development and funding needs of the beneficiary micro unit / entrepreneur and also provide a reference point for the next phase of graduation / growth. The loan limits under the three products are given below:-

SHISHU: Covering loans upto 50,000/-

KISHOR: Covering loans above 50,000/- and upto 5 lak

TARUN: Covering loans above 5 lakh and upto 10 lakh

6.5.2 The National Institute for Entrepreneurship and Small Business Development (NIESBUD) is a premier organization of the Ministry of Skill Development and Entrepreneurship (MSDE), Government of India engaged in training, consultancy, research, etc. in order to promote entrepreneurship and Skill Development. The major activities of the Institute include Training of Trainers, Management Development Programmes, Entrepreneurship-cum-Skill Development Programmes, Entrepreneurship Development Programmes and Cluster Intervention. NIESBUD has provided training to 11,46,209 persons as of March 31, 2018 through 44,035 different training programmes since inception. This includes 4,384 international participants hailing from more than 141 countries throughout the globe. NIESBUD is an apex organisation working under the administrative control of the MSDE.

The major activities of the Institute include Training of Trainers, Management Development Programmes, Entrepreneurship-cum-Skill Development Programmes, Entrepreneurship Development Programmes and Cluster Intervention. The Core Objectives of the Institute are as follows:

To standardize and systemize the processes of selection, training, support and sustenance of potential and existing entrepreneurs.

To support and motivate institutions/organizations in carrying out training and other entrepreneurship development related activities.

To serve as an apex national level resource institute for accelerating as well as enhancing the process of entrepreneurship development, to measure the impact of the same within different strata of the society.

To provide vital information and support to trainers, promoters and entrepreneurs by organizing research and documentation activities relevant to entrepreneurship and skill development.

To create a holistic environment to train the trainers, promoters and consultants in diverse areas of entrepreneurship and skill Development.

To offer consultancy nationally/internationally for promotion of entrepreneurship and small business development at national and international level.

To provide national/international forums for interaction and exchange of ideas for policy formulation and its refinement at various levels.

To share experience and expertise in entrepreneurship development across national frontiers to create awareness on it at national level.

To interchange international experience and expertise in the field of entrepreneurship development for mapping its development at international levels too.

7. Admission for CTS trades:**7.1. Important Notice issued by the Central Ministry:**

ADMISSION NOTICE
by
DGT, Government of India
Ministry of Skill Development & Entrepreneurship
Directorate General of Training
Shram Shakti Bhavan, Rafi Marg,
New Delhi- 110 001.

FOR ATTENTION OF ADMISSION SEEKERS TO NATIONAL COUNCIL FOR VOCATIONAL TRAINING (NCVT)
APPROVED TRADES IN GOVERNMENT & PRIVATE ITIs

All admission seekers to NCVT approved trades (Engineering/Non-Engineering) are advised in their own interest to confirm and satisfy themselves before seeking admission to any trade that the respective trade/unit in the Government/Private Industrial Training Institute (ITI) is affiliated to NCVT. Only the trainees seeking admission to the trade/unit which is found to be affiliated under NCVT as on the date of admission are eligible to appear for the All India Trade Test under NCVT and to be awarded with National Trade Certificate.

The list of affiliated trades/units in each Institute is available in the respective Institute and the State Directorate.

It is also informed in the interest of general public that NCVT/ Govt. of India does not recognize any Government and Private Industrial Training Institute. NCVT affiliates only the trades and its units run by a particular ITI.

NO ADMISSION IS ALLOWED IN NCVT TRADES WITHOUT AFFILIATION.

**Director of Training/
Secretary NCVT**

IMPORTANT NOTICE

The candidates who are desirous to take admission in ITIs may also note that the trades/units shown in Annexure-I and Annexure-IV currently offered under NCVT are subjected to compliance of revised guidelines received from Directorate General of Training (DGT), New Delhi inter-alia stipulating that the trades/units whose period of NCVT affiliation has exceeded five years, would need to be re-affiliated to NCVT. While efforts are being made to seek re-affiliation of such trade courses to NCVT, it may take considerable time. **In the event of the NCVT re-affiliation process of such trades/units not being completed in time, the admission to those trades/units would be offered under State Council for Vocational Training (SCVT) and SCVT would accordingly conduct the Final Trade Test and issue Certificate to all the successful candidates.**

7.2 Availability of Seats

The number of seats available and trades offered at various ITIs for the year 2019-2020 are shown in Annexure I to V.

7.3 Trade Details and Eligibility Criteria for Admissions**7.3.1 Engineering Trades:**

Sr. No	Trade	Duration	NSQF level	Entry Qualification
1	Information & Communication Technology System Maintenance	2 years (4 semesters)	Level 5	Passed 10 th with Science and Maths as subjects under 10+2 system of Education
2	Fitter	2 years (4 semesters)	Level 5	Passed 10 th Class with Science and Mathematics under 10+2 system of Education or its equivalent.
3	Turner	2 years (4 semesters)	Level 5	Passed 10 th Class with Science and Mathematics under 10+2 system of Education or its equivalent.
4	Machinist	2 years (4 semesters)	Level 5	Passed 10 th Class with Science and Mathematics under 10+2 system of education or its equivalent.
5	Electrician	2 years (4 semesters)	Level 5	Passed 10 th Class examination under 10+2 System of education with Science and Mathematics or its equivalent.
6	Instrument Mechanic	2 years (4 semesters)	Level 5	Passed 10 th Class examination under 10+2 system of education with Science and Mathematics or its equivalent.
7	Mechanic Refrigeration & Air-Conditioner	2 years (4 semesters)	Level 5	Passed 10 th Class Examination under 10+2 system of Education
8	Electronics Mechanic	2 years (4 semesters)	Level 5	Passed 10 th Class examination under 10+2 System of education.
9	Draughtsman (Mechanical)	2 years (4 semesters)	Level 5	Passed 10 th Class with Science and Mathematics under 10+2 system of education or its equivalent.
10	Draughtsman (Civil)	2 years (4 semesters)	Level 5	Passed 10 th Class with Science and Mathematics under 10+2 system of Education or its equivalent.
11	Mechanic Motor Vehicle	2 years (4 semesters)	Level 5	Passed 10 th Class examination with maths and Science.
12	Mechanic Diesel	1 year (2 semesters)	Level 4	Passed 10 th Class examination with Mathematics and Science
13	Wireman	2 years (4 semesters)	Level 4	Passed 10 th Class.
14	Welder	1 year (2 semesters)	Level 4	Pass 10 th Class Examination under 10+2 system of Education
15	Carpenter	1 year (2 semesters)	Level 4	Passed 10 th Class Examination under 10+2 System of system.
16	Plumber	1 year (2 semesters)	Level 4	10 th Passed under 10+2 system of Education.
17	Attendant Operator (Chemical Plant)	2 years (4 semesters)	Level 5	Passed 10 th Class Examination under 10+2 system with Science and Mathematics or equivalent.

18	Solar Technician (Electrical)	1 year (2 semesters)	Level 4	Passed 10 th Class Examination under 10+2 system of Education with maths and Science
19	Welder (GMAW & GTAW)	1 Year (2 Semesters)	Level - 3	Passed 8 th Class with Science and Mathematics under 10+2 system of Education or its equivalent.
20	Welder (Fabrication & Fitting)	1 Year (2 Semesters)	Level - 3	Passed 8 th Class pass.

7.3.2 Non-Engineering Trades:

Sr. No	Trade	Duration	NSQF level	Entry Qualification
1.	Computer Operator & Programming Assistant	1 year (2 semesters)	Level 4	Passed in 10 th Class examination under 10+2 system
2.	Desk Top Publishing Operator	1 year (2 semesters)	Level 4	Passed 10 th Class examination under 10+2 system of education.
3.	Stenographer & Secretarial Assistant (English)	1 year (2 semesters)	Level 4	Passed 10 th Class examination under 10+2 system of education.
4.	Secretarial Practice (English)	1 year (2 semesters)	Level 4	Passed 10 th Class examination under 10+2 system of education.
5.	Basic Cosmetology	1 year (2 semesters)	Level 4	Passed 10 th Class Examination.
6.	Food Production (General)	1 year (2 semesters)	Level 4	Passed 10 th Class examination under 10+2 System of education.
7.	Food & Beverages Service Assistant	1 year (2 semesters)	Level 4	Passed 10 th Class examination
8.	Sewing Technology	1 year (2 semesters)	Level 4	Passed 10 th Class under 10+2 system of examination.
9.	Multimedia, animation & Special Effects	1 year (2 semesters)	Level 4	Passed 10 th Class examination under 10+2 system of Education
10.	Garment and Sales Asst.	1 year (2 semesters)	-To be aligned with NSQF	Passed 8 th Class examination
11.	Housekeeper	1 year (2 Semester)	Level 4	Passed 10 th Class examination under 10+2 system of Education
12.	Front Office Assistant	1 year (2 Semester)	Level 4	Passed 10 th Class examination.
13.	Travel and Tourism Assistant	1 year (2 Semester)	Level 4	Passed 10 th Class examination under 10+2 system of Education
14.	Driver cum Mechanic (LMV)	Six Months (01 Semester)	Level 3	Passed 8 th Class Examination under 10+2 system of Education & should have completed 18 yrs. of age
15.	Digital Photographer	1 year (2 Semester)	Level 4	Passed 10 th class examination under 10+2 System of education.
16.	Computer Hardware & Network Maintenance	1 year (2 semesters)	Level 4	Passed 10 th Class examination under 10+2 system of education with Science and Mathematics.

7.3.3 Trades under COE:

Sr.No	Trade	Duration	Entry Qualification
At Canacona Govt. ITI			
1.	Hospitality Management Advanced Modules With the following modules: (a) Food Production (b) Front office Management (c) Food & Beverage Service (d) House keeping	6months each	Completed BBT in Hospitality OR NTC/NAC in relevant trade OR Diploma in Hospitality
2.	In-Plant Specialized Training in Hospitality Management	6 months	Completed any Advanced Modules in Hospitality Management course

N.B: The entry qualification for all above courses is same for NCVT & SCVT.

7.4 Age: A candidate having minimum age of 14 years and above as on 1.7.2019 shall be eligible to seek admission in the ITI and candidate having minimum age of 18 years as on 01.7.2019 shall be eligible for admission to short term course of Driver cum mechanic.

7.5 Standard of Physical Fitness:

No rigid standards are laid down but candidates seeking admission should be physically fit for the work for which they are to be trained, and candidates if selected for admission shall produce Medical Certificate to that effect from Registered Medical Practitioner.

7.6 Domicile:

A candidate seeking admission in the Government or Private ITI should have been residing in Goa for a period of not less than 10 years preceding the date of the application. A Residence Certificate, issued by the Mamlatdar, indicating the period of continuous residence in Goa for the last ten years preceding the date of application could be enclosed along with the application. However, if the candidates establish that they are continuous residents of the State of Goa for the required years through their academic record, no Residential Certificate issued by the Mamlatdar is required to be produced. He/she would however, have to produce a copy of valid academic record/s and any other document/s to establish their claim of being continuous residents of the State of Goa. In case, there is any major break in the education, even though the residence was continued in the State of Goa, then, candidate would be then required to produce the documentary evidence or certificate from the Mamlatdar that during the said break period, he/she was in Goa and fulfilled requirement of continuous residence in Goa for required period.

The aforesaid condition shall not apply to:

- Children of Central/State/Union Territory Government employees and employees of Government of India undertakings who are posted in Goa.
- Children of Freedom Fighters registered as such in the Home Department of Government of Goa.
- Children of parents of Goan origin, who are born in Goa and who are serving in Armed Forces or retired from the Armed Forces provided that such children pass their qualifying examinations under the Central Board of Education or Goa Board of Secondary and Higher Secondary Examinations or Goa Board of Technical Education as the case may be and children of Ex-Servicemen registered with Rajya Sainik Board in Goa who have studied and passed the minimum qualifying examination from the Schools/Polytechnics in Goa. Parents of Goan origin means both father and mother born in Goa.

Relaxation in domicile period will be considered if seats remain vacant even after exhausting above options for SCVT & NCVT trades in all the ITIs on 31/07/2019 after the completion of the Second Round mentioned in the Schedule of admission process.

7.7 Reservation of Seats:

The following percentage of reservation of seats would be applicable to the Government and the Private ITIs as applicable to State of Goa:

A. Certain percentage of the total seats at each I.T.I. in the respective trades as indicated below have been reserved for various categories of the candidates:

- | | |
|---------------------------------|-------------------|
| a) Scheduled Castes (SC) | 02 per cent |
| b) Scheduled Tribes | 12 per cent |

- c) Physically Handicapped Persons (PHP) 04 per cent
(Physical Handicap Subject to limits laid down in DGET circular No.MSDE-19/02/2018-CD(Pt) dated 05-04-2019)
- d) Other Backward Classes (OBC) 27 per cent
- e) Economically Weaker Section (EWS) 10 per cent
(Economically Weaker Section(EWS) Subject to limits laid down in DGT circular No. MSDE-19/02/2018-CD) dated 05-04-2019
- 30% of the seats in each of all the above categories shall be reserved for women candidates.

B. One seat is reserved at every Government ITI for each of the following categories and the allocation of the trade is at the discretion of the Director of Skill Development and Entrepreneurship.

- a) Children of Freedom Fighters (CFF)
b) Children of State and Central Government Employees (CGE)
c) Children of African Repatriates of Goan Origin (CAR)

C. One seat in each of the ITIs are reserved for wards of defence personnel in the following order of priority:

- a) Children of deceased/disabled Ex-Servicemen, including those killed/disabled during peacetime.
b) Children of Ex-servicemen
c) Children of serving Jawans
d) Children of serving officers
e) Ex-Servicemen

The allocation of trades is at the discretion of Director, Skill Development and Entrepreneurship.

The reservation shall be considered only if specifically indicated in the application form by the candidate.

The Institute Managing Committee (IMC) of Vasco Govt. ITI is permitted to utilize up to 20% of sanctioned seats for admissions to this Institute on merit basis against the payment of fee of Rs.5000/- (Rupees five thousand only) per year as fixed by IMC in addition to the tuition fee and caution money deposit.

The unutilized IMC quota seats shall be filled after the second round of admission at the said ITI by admitting general category candidates on merit basis against the payment of fee of Rs 5000/- (five thousand only) per year as fixed by IMC in addition to the tuition fee and caution money deposit.

7.8 Fees

7.8.1 Tuition Fees:

(a) For Government ITIs:

Each trainee shall be required to deposit on admission a non-refundable Tuition Fee towards his/her training in the trade course to which he/she is admitted as indicated below:

Sr.No.	Trade	Tuition Fee
1.	All Advanced Modules (CoE)	Rs.2500/-
2.	All other trades (CTS)	Rs.2500/-

NOTE: Tuition Fee is waived off for candidates belonging to SC /ST /BPL categories and also for those having annual family income of less than Rs.3,00,000/-.

(b) For Private ITIs:

Sesa Private ITIs (Sankhali):

Sr. No.	Types of Fees	Trade Course				
		Fitter	Machinist	Electrician	Instrument Mech.	Mech. Diesel
1	Tuition Fees	Rs. 2500/-	Rs. 2500/-	Rs. 2500/-	Rs. 2500/-	Rs. 2500/-
2	Caution Money (Refundable)	Rs. 500/-	Rs. 500/-	Rs. 500/-	Rs. 500/-	Rs. 500/-
3	Total	Rs. 3000/-	Rs. 3000/-	Rs. 3000/-	Rs. 3000/-	Rs. 3000/-

Montfort Private ITI:

Sr. No.	Type of Fee	Amount		
		One year course	Two year course	
			1 st year	2 nd year
1.	Tuition fee	Rs. 7000/-	Rs. 7000/-	Rs.6,500/-
2.	Caution Money (Refundable)	Rs. 300/-	Rs. 300/-	Rs. 300/-
3.	Internal Exam Fees	Rs. 200/-	Rs. 200/-	Rs. 200/-
4.	Identity card	Rs. 60/-	Rs. 60/-	Rs.60/-
5.	Total	Rs. 7560/-	Rs. 7560/-	Rs. 7060/-

Keerti Vidyalaya Private Industrial Training Institute, Rai, Siolim

Sr.No	Types of Fees	Trade Course		
		COPA*	Sewing Technology*	Mechanic Diesel *
1	Tuition Fees	Rs. 12000/-	Rs. 7000/-	Rs. 15000/-
2	Caution Money (Refundable)	Rs.300/-	Rs.300/-	Rs. 300/-
3	Identity Card	Rs.50/-	Rs.50/-	Rs. 50/-
4	TOTAL	Rs. 12350/-	Rs. 7350/-	Rs. 15350/-

Bhumika Private Industrial Training Institute, Palye, Pernem

Sr. No	Types of Fees	Trade Course				
		Food Production (General)*	Food & Beverages Guest Service Assistant*	Electrician*	Plumber*	COPA*
1	Tuition Fees	Rs.12000/-	Rs.12000/-	Rs. 15000/-	Rs. 8000/-	Rs. 10000/-
2	Caution Money (Refundable)	Rs.300/-	Rs.300/-	Rs.300/-	Rs.300/-	Rs.300/-
3	Identity Card	Rs. 30/-	Rs. 30/-	Rs. 30/-	Rs. 30/-	Rs. 30/-
4	TOTAL	Rs.12330/-	Rs.12330/-	Rs.15330/-	Rs. 8330/-	Rs. 10330/-

Indo- German Private Industrial Training Institute, Marna, Siolim

Sr. No	Types of Fees	Trade Course			
		Electrician*	Food Production (General)*	Food & Beverages Guest Service Assistant*	Plumber*
1	Tuition Fees	Rs. 15000/-	Rs. 12000/-	Rs. 12000/-	Rs. 8000/-
2	Caution Money (Refundable)	Rs.300/-	Rs. 300/-	Rs. 300/-	Rs. 300/-
3	Identity Card	Rs.40/-	Rs.40/-	Rs.40/-	Rs.40/-
4	TOTAL	Rs.15340/-	Rs. 12340/-	Rs. 12340/-	Rs. 8340/-

* Course will start subject to grant of SCVT affiliation.

7.8.2 Examination Fees:

The trainees declared eligible to appear for the yearly/semester pattern trade test of craftsmen under CTS or CoE scheme conducted at the end of each year/semester shall have to pay an examination fee as under :-

Exam Pattern/Category	Fees per attempt
Regular trainee – Annual pattern /per year	Rs. 700/-
Repeater- Annual pattern /per year	Rs. 1000/-
Repeater- Semester pattern	Rs. 575/-
Regular trainee of DCM trade (One Semester)	Rs. 275/-
Private candidate	Rs.2,075/-
CoE BBBT Repeaters	Rs. 500/-
CoE Advance Modules	Rs. 200/-
CoE Advance Modules Repeaters	Rs. 500/-

7.8.3 Caution Money Deposit:

(a) For Government ITIs:

Each trainee will be required to deposit on admission a sum of Rs.1500/- (Per Trade Course) to guard against loss or damage to equipments or tools entrusted to his/her charge during the course of training. A second deposit may also be asked for if the first one has been exhausted.

The caution money is refundable to a trainee on satisfactory completion of the course or in the event of his/her discharge from the institute on any grounds, after deduction of Government dues, if any Caution money deposits which are not claimed within six months after completion of training, and in the case of trainees who discontinue their training after one month of its commencement shall be forfeited to the Government.

(b) For Private ITIs:

A refundable amount as mentioned in the fee structure of each Private ITI is collected from each candidate as caution money deposit.

7.9 Sale of Prospectus:

A candidate desiring to seek admission in any of the Government or Private ITIs can purchase the “common” Prospectus from any of the nearest Government or Private ITI and Office of Directorate of Skill Development & Entrepreneurship.

7.10 Instructions for filling up of the Application Form and Acknowledgement Card:

1. Fill up the Application Form and Acknowledgement Card only after reading the Prospectus and the Application Form carefully.
2. The name of the candidate should be given in full as recorded in the birth certificate and a copy of the birth certificate shall be compulsorily enclosed.
3. The candidate should fill up the form in all respects without which it will not be considered for drawing the merit list.

7.11 Submission of Application Form:

(a) Trade Courses at the ITIs under CTS start in the month of July. Application in the prescribed performa (appended herewith) along with SELF-ATTESTED COPIES of the following certificates shall be submitted to the office of any nearest ITI on or before the date specified in the ‘Schedule of Admission Process’.

(b) Certificate of passing and the statement of marks obtained in the minimum qualifying examination i.e. VIIIth, S.S.C.E., or Diploma in Engineering as the case may be. The candidates applying for Advanced Modules shall submit certificate stating completion of BBBT course. The candidates failing in S.S.C.E. shall produce “Statement of Marks”. The candidates passing VIIIth Std. shall produce statement of marks and a passing certificate to the effect from the concerned school.

(c) Leaving Certificate from the School/Institute/College attended last by the candidate. In case such certificate is not available at the time of submission of an application to the ITI a candidate selected for admission to the ITI shall have to produce it while taking admission in the ITI.

(d) The candidates who are not able to produce leaving certificates from the past school or college last attended by them due to genuine reasons may produce a transfer certificate / bonafide certificate / a certificate mentioning that the candidate was a student of the particular school / college during the last academic year and that his / her leaving certificate is retained with that school or college due to genuine reasons.

(e) Birth Certificate from the Registrar of Births and Deaths.

(f) A certificate of continuous period of residence of 10 years in Goa on the date of application from the Mamlatdar having jurisdiction over the area of residence.

(g) In case of children of employees of the Central/State Government or Government of India Undertakings, a certificate issued by the Head of the Office or Department, also stating therein the relationship with the candidate and the place of his/her posting in Goa.

(h) In case of children of Ex-Servicemen/Defence Personnel a certificate from the Competent Authority to the effect that either of their parents had been ex-serviceman/ Defence personnel.

(i) In case of children of Freedom Fighters, a certificate from the Home Department of Government of Goa stating that his/her father/mother has been registered as Freedom Fighter.

(j) In case of the candidates belonging to Scheduled Castes/Scheduled Tribes/Other Backward Class, a certificate to that effect from the Mamlatdar/Deputy Collector/Sub-Divisional Officer of the concerned area.

(k) In case of a candidate belonging to SC/ST/BPL category or having annual family income less than Rs 3,00,000/- p.a., a certificate to that effect from the concerned competent authority, failing which exemption of the tuition fees in Government ITIs shall not be considered.

(l) In case of the Physically Handicapped candidates a certificate from the Dean, Goa Medical College, regarding the nature of the disability or handicap and the extent to which the candidate is fit for joining the desired trade in the ITI.

(m) In case of the Children of the African Repatriates of Goan origin, a certificate to that effect from the Home Department of Government of Goa.

Candidates passing Std. 10th through the National Open School, without Maths & Science (not Home Science) subjects, do not qualify for admission to courses, where Maths & Science are the subjects required for minimum Educational Qualifications under NCVT/ SCVT.

The duly filled application form along with the required certificates should be submitted personally at the entry counter of the respective I.T.I. or sent through registered post AD addressed to the Principal of the concerned ITI. The acknowledgement card along with the application number should be obtained from the concerned I.T.I. as it will be required to be preserved and produced whenever called for. Late and/or incomplete applications or those without self attested copies of the necessary certificates may not be considered.

7.12 Method of Selection:

➤ A centralized system of admission procedure will be followed and a common merit list would be drawn based on the applications received at the Government as well as the Private ITIs. A separate merit list of S.S.C. and VIII Std. entry qualification will be drawn for selection of candidates eligible for admission at any of the Government or Private ITIs by a central admission committee appointed by the Directorate of Skill Development & Entrepreneurship. A provisional merit list will be displayed in all the Government and Private ITIs and a period of three days would be given to the candidate to comply to any deficiency/objection noticed if any by reporting the same to the authorities in the ITI where he/she had submitted the duly filled application form. A final merit list would be prepared by complying to the discrepancies raised if any by any of the candidate and displayed in all the Government and Private ITIs and also on the website of Directorate of Skill Development & Entrepreneurship i.e. www.sdct.goa.gov.in.

➤ Allotment of seats would be done in a centrally located venue decided by the State Director, details of which will be available in all ITIs.

- The admissions shall be strictly based on merit cum choice and on first come first serve basis to the candidates on the days specified in the “Centralized Admission Center”. The candidate present will be given an opportunity to select a seat of his/her choice from the seats available at the point of his/her merit number.
- If the candidate fails to turn-up for counseling as specified in the “Centralized Admission Center” or does not accept admission offered he/she shall forfeit the claim of seat as per his/her turn in merit position for that round and the seat will be offered to the next candidate in the merit list.
- In case during the round of admission, the candidate reports late for admission his/her candidature shall be considered for the then available seats only after the completion of respective session. The list or order of candidates already admitted shall remain unchanged.
- Every eligible candidate who is desirous of seeking admission shall remain present in person at the admission center as per schedule of admission rounds along with Acknowledgement card, and relevant documents. Candidates desiring to get exemption from payment of tuition fees in Government ITIs shall produce the SC/ST/BPL certificate or income certificate (of income less than Rs.3,00,000/-) from the competent authority at the time of admission in respective ITIs. No exemption shall be considered later.
- Changes in the “Centralized Admission Center” if any will be notified through local newspapers and no personal communication will be sent to the individual candidates.
- The centralized system of admission would be applicable only for the first round of the respective categories as mentioned in the “Centralized Admission Center”. The vacant seats if any shall be filled by the Principals of respective ITIs based on the common merit list on first come first serve basis.
- If any seats remain vacant even after this, the Principals of respective ITIs may sell the Prospectus and fill up the vacant seats on first come first serve basis by following eligibility criteria mentioned in the prospectus.
- The admitted trainees shall submit a medical fitness certificate issued by a registered medical practitioner along with the duly filled admission form to the respective ITI on the next working day after obtaining admission at the counseling center/ITI, failing which his/her admission is liable for cancellation.
- The decision of the Admission committee in respect of interpretation of the rules and guidelines of admission shall be final and binding on all concerned.
- A candidate desiring to seek admission in a particular trade will have to specifically enclose the mark sheet of the entry qualification required for the respective trade.

Note: Online Admission System

- This Department is still in the process of implementation of an Online Admission System for the Academic year 2019-20. Once the same is finalized, the detailed Online Admission procedure shall be published in the local dailies and will also be displayed at the Government and Private ITIs, as well as, uploaded on the Departmental and respective ITI-Websites, for related information of all concerned.
- In case this Online Admission is adopted by the State, the same shall replace the existing purely-offline Centralized Admission Procedure.
- A Help Desk /facilitation counter would also be set up at all ITIs in the State to assist the prospective candidates in providing assistance for implementing the Online Admission System.

NOTE: The original testimonials submitted by the candidates at ITI shall be returned to the candidates after of 15 days from the date of commencement of the training.

7.13 Completion of Admission Procedure

Procedure of admission shall not continue beyond 31st July 2019 as per the DGT norms.

4. FREQUENTLY ASKED QUESTIONS (FAQs)

Sr. No	Issue/Questions	Clarifications / Responses
1.	What are the courses offered in the ITIs?	There are altogether 40 Courses offered in various ITIs. The details are given in the prospectus. (Refer page No. 54-56)
2.	What is the certification awarded after completion of training?	After successful completion of training, the trainees are awarded National Trade Certificate (NTC) under NCVT and Trade Certificate under SCVT
3.	What is the eligible age limit?	Minimum age required is 14 years as on 01.07.2019 for all the courses except Driver cum Mechanic course for which minimum age required is 18 years.
4.	Is ITI Certificate equivalent to Diploma?	Not equivalent, ITI is Skill development and Job oriented training and certification course.
5.	From where can I buy the Prospectus?	Prospectus can be purchased from any nearby Govt/ Private ITIs or from Directorate of Skill Development and Entrepreneurship, Panaji
6.	Where do I need to submit my application for admission?	The application form for admission is required to be submitted at any of the Govt./Pvt. ITIs
7.	How do I come to know, which Course is available, where?	The details are available in the Prospectus. (Refer page No. 63-66)
8.	How do I know the Employment opportunities for the selected Course?	The details are available in the Prospectus. (Refer page No. 41-45)
9.	What are my future prospects after completion of Course?	The details are available in the Prospectus. (Refer page No. 49-52 & 41-45)
10.	What are the Course Timings?	The course timing are from 8.00am – 3.30pm in the 1 st shift and from 10.00am – 5.30pm in the 2 nd shift (including Lunch break)
11.	Is there any transport facility available at the ITIs?	Yes, transport facility is available for all the Government ITIs, except ITI Bicholim and ITI Mapusa;
12.	ITI courses are affiliated to which Council/s?	Courses offered at ITIs are affiliated to National Council for Vocational Training (NCVT) or State Council for Vocational Training (SCVT) as per the details given in the Prospectus
13.	How many Government ITIs are there in the State?	There are Ten Government ITIs located in the State. Detailed information available in this Prospectus;
14.	Is there any linkage of the ITIs with the Industry?	All the Government ITIs have Institute Managing Committees, whose Members, including the Chairman, are drawn from reputed local Industries;
15.	Are there any Holidays / Leaves admissible to Trainees?	Trainees are allowed to avail same number of Holidays as declared by the Government of Goa. Further, Casual, Medical and Special Leaves are also applicable as per details available in the Prospectus;
16.	What are the disciplinary measures required to be followed by the trainees?	The Trainees are required to wear the ITI Uniform/Workshop Dress and I-Card at all times. While, Use of Mobiles in the ITI Campus is strictly prohibited, Ragging in any form is also strictly banned and punishable
17.	What are the concessions/ facilities offered to the trainees?	Free transport facility for SC, ST & BPL category, Free uniform cloth and workshop cloth to all trainees. However stitching charges are to be borne by the trainees, free facility for recreation , library, sports etc.
18.	Are there any Scholarships available for trainees?	Merit Scholarship & BPL Scholarship are offered Details are available in the Prospectus. (Refer page No. 47-48)
19.	Is there any Vertical Mobility possible?	Yes, details are available in the Prospectus. (Refer page No. 49-50)
20.	What is the eligibility criteria for each Course?	Details are available in the Prospectus. (Refer page No. 54-56)
21.	What is the Reservation/s available?	Details are available in the Prospectus. (Refer page No. 56-57)
22.	What are the Fees charged?	Details are available in the Prospectus. (Refer page No. 57-59)

ANNEXURE - I

TRADE-WISE INTAKE CAPACITY AT GOVERNMENT ITIs FOR YEAR 2019-20 IN TRADES AND UNITS RUN UNDER CTS SCHEME AND AFFILIATED TO NATIONAL COUNCIL FOR VOCATIONAL TRAINING (NCVT), NEW-DELHI

Sr. No.	ITI	Computer Operator & Programming Assistant	Information & Communication Technology System Maintenance	Desktop Publishing Operator	Fitter	Turner	Machinist	Electrician	Instrument Mechanic	Mechanic Refrigeration Air Conditioner	Electronics Mechanic	Draughtsman (Mechanical)	Civil Draughtsman	Stenographer & Secretarial Assistant (English)	Secretarial Practice (English)	Mechanic Motor Vehicle	Basic Cosmetology	Food Production (General)	Food & Beverages Service Assistant	Mechanic Diesel	Welder	Carpenter	Wireman	Plumber	Sewing Technology	Total
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
1	Farmagudi	48	24	-	20	20	20	40	24	24	24	20	24	-	-	24	-	-	-	48	40	-	-	-	-	400
2	Panaji	-	-	-	20	-	-	20	-	-	-	-	-	-	-	24	-	24	20	48	40	-	-	24	-	220
3	Mapusa	48	24	-	20	20	-	20	-	-	24	-	-	-	24	24	24	-	-	48	-	-	-	-	-	276
4	Margao/Aquem Baixo	48	24	24	20	-	-	20	-	-	24	-	-	-	-	-	48	24	20	-	-	-	-	48	40	340
5	Cacora	24	-	-	20	-	-	20	-	24	-	-	-	-	-	-	-	-	-	48	40	-	-	-	-	176
6	Pernem	48	-	-	20	-	-	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24	-	112
7	Bicholim	48	-	-	20	-	-	40	-	-	-	-	24	24	-	-	-	-	-	48	-	-	20	-	20	244
8	Sattari	-	-	24	20	20	-	20	-	24	-	-	-	-	-	-	-	-	-	48	20	-	-	48	20	244
9	Canacona	24	-	-	20	-	-	20	-	-	24	-	-	-	-	-	-	-	-	24	20	24	-	-	20	176
10	Vasco	24	-	24	20	-	-	20	-	24	24	-	-	-	-	-	-	-	-	48	20	-	20	24	-	248
	Total	312	72	72	200	60	20	240	24	96	120	20	48	24	24	72	72	48	40	360	180	24	40	168	100	2436

* All courses are NSQF Compliant, If the trade is not granted NCVT affiliation, the trainee's admission shall be considered under SCVT.

ANNEXURE - II

TRADE-WISE INTAKE CAPACITY AT GOVERNMENT ITIs FOR 2019-2020 IN TRADES AND UNITS RUN UNDER CTS SCHEME AND AFFILIATED TO STATE COUNCIL FOR VOCATIONAL TRAINING (SCVT), PANAJI-GOIA

Sr. No	ITI	Computer Operator & Programming Assistant	Desktop Publishing Operator	Machinist	Electronics Mechanic	Basic Cosmetology	Welder	Welder (Fabrication & Fitting)	WELDER (GMAW & GTAW)	Wireman	Plumber	Sewing Technology	Mechanic Refrigeration & Air Conditioner	Computer Hardware & Network Maintenance	Attendant Operator (Chemical Plant)	Mechanic Motor Vehicle	Multimedia, animation & special effects	Garment & Sales Assistant #	Solar Technician (Electrical)	House Keeper	Front Office Assistant	Travel & Tour Assistant	Food Production (General)	Food & Beverage Service Assistant	Driver Cum Mechanic	Digital Photographer	Total
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
1	Farmagudi	-	-	-	-	-	-	-	40	-	48	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24	112
2	Panaji	24	-	-	-	-	-	-	-	-	-	-	24	-	-	-	-	-	-	48	24	24	24	20	-	-	188
3	Mapusa	-	-	20	-	-	-	40	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	60
4	Margao/Aquem Baixo	-	-	-	-	-	20	-	-	-	-	-	24	24	-	-	-	-	-	-	-	-	-	-	-	-	68
5	Cacora	-	24	-	-	24	-	40	-	20	48	20	-	-	-	24	-	-	20	-	-	-	-	-	-	-	220
6	Pernem	-	-	-	-	-	40	-	-	-	24	-	24	-	-	-	-	-	-	-	-	-	-	-	-	-	88
7	Bicholim	-	-	20	24	-	40	-	-	-	48	-	-	-	-	-	24	20#	20	-	-	-	-	-	-	-	196
8	Sattari	-	-	-	24	-	-	-	-	-	-	-	-	-	-	24	-	-	-	-	-	-	-	-	-	-	48
9	Canacona	-	-	-	-	-	-	-	-	20	48	-	-	-	-	-	-	-	-	24	-	-	24	20	20	-	156
10	Vasco	-	-	-	-	-	-	-	20	-	-	-	-	-	24	-	-	-	-	-	-	-	-	-	-	-	44
	Total	24	24	40	48	24	100	80	60	40	216	20	72	24	24	48	24	20	40	72	24	24	48	40	20	24	1180

Course will start subject to alignment to NSQF.

ANNEXURE-III**TRADE-WISE INTAKE CAPACITY AT GOVERNMENT ITIs FOR 2019-20 IN TRADES AND UNITS RUN UNDER C.O.E. SCHEME AND AFFILIATED TO STATE COUNCIL FOR VOCATIONAL TRAINING (SCVT), PANAJI, GOA**

Sr. No.	ITI	Hospitality Management Advanced Modules				TOTAL
		Food Production	Front Office Management	Food & Beverage Service	House Keeping	
1	2	4	5	6	7	9
1	Canacona	32	16	32	16	96
	TOTAL	32	16	32	16	96

ANNEXURE - IV**TRADE-WISE INTAKE CAPACITY AT PRIVATE ITIs FOR YEAR 2019-20 IN TRADES AND UNITS RUN UNDER CTS SCHEME AND AFFILIATED TO NATIONAL COUNCIL FOR VOCATIONAL TRAINING (NCVT), NEW- DELHI**

Sr No	ITI	Fitter	Machinist	Electrician	Instrument Mechanic	Electronics Mechanic	Total
1	2	3	4	5	6	7	8
1	Sesa, Sankhali	20	20	20	24	-	84
2	Montfort, Corlim	20	-	-	-	24	44
	Total	40	20	20	24	24	128

**If the trade is not granted NCVT affiliation, the trainee's admission shall be considered under SCVT.*

ANNEXURE - V

TRADE-WISE INTAKE CAPACITY AT PRIVATE ITIs FOR 2019-20 IN TRADES AND UNITS RUN UNDER CTS SCHEME AND AFFILIATED TO STATE COUNCIL FOR VOCATIONAL TRAINING (SCVT), PANAJI-GOA.

Sr. No.	ITI	Computer Operator Programming Assistant	Electrician	Mechanic Diesel	Food Production (General)	Food & Beverages Guest Service Assistant	Sewing Technology	Plumber	Total
1	2	3	4	5	6	7	8	9	10
1	Montfort, Corlim	24	20	-	-	-	-		44
2	Keerti Vidhyalaya, Siolim	24*	-	24*	-	-	20*		68
3	Bhumika, Palye, Pernem	24*	20*	-	24*	20*	-	24*	112
4	Indo – German, Marna-Siolim	-	20*	-	24*	20*	-	24*	88
	Total	72	60	24	48	40	20	48	312

* Course will start subject to grant of SCVT affiliation.

ANNEXURE –VI

AFFIDAVIT BY STUDENT

I.....(Full name of the student with admission / registration / enrolment number) S/O /Mr./Mrs/Ms..... having been admitted to..... (Name of the Institution) have been noted the content of Goa Prohibition of ragging (Amendment) Act. 2010 (ACT 17 of 2010) herewith after the "ACT"). Carefully read understood the provisions in the said Act.

- 1. I have in particular perused clause 2(e) of the Act and am aware as to what constitutes ragging.
- 2. I have also in particular pursued clause 5 and clause 6 of the Act and am fully aware of the penal and administrative action that is liable to be taken against me in case i am found guilty of or abetting ragging, actively or passively, or being part of a conspiracy to promote ragging.
- 3. I hereby solemnly aver and undertake that.
 - A. I will not indulge in any behavior or act that may be constituted as ragging under clause 2 (e) of the Act.
 - B. I will not participate in or abet or abet or propagate through any act of commission or mission that may be constituted as ragging under the clause 2(e) of the Act.
- 4. I hereby affirm that if found guilty of ragging. I am liable for punishment according to clause 6 of the Act without prejudice to any criminal action that may be taken against me under any penal law for time being in force.
- 5. I hereby declare that i have not been expelled or debarred from admission in any institution in the country on account of being found quality of, abetting or being part of a conspiracy to promote ragging: and further affirm that, in case the declaration is found to be untrue. I am aware that my admission is liable to be cancelled.

Declared this..... day of month of year.

Signature of Deponent

Name:

VERIFICATION

Verified that the contents of this affidavit are true to the best of my Knowledge and no part of the affidavit is false and nothing has been concealed of misstated therein.

Verified at..... (Place) on this the..... (day) of..... Month..... (Year)Solemnly affirmed and signed in my presence on this the..... (day) of..... Month..... (Year)..... after reading the contents of this affidavit.

Principal Govt/Pvt ITI

ANNEXURE –VII**AFFIDAVIT BY THE PARENT / GUARDIAN**

I Mr./Mrs./Ms (full name
of Parent/guardian father/Mother/Guardian of

.....
(Full name of student with admission/registration/enrolment number..... with admission/registration enrolment number) having been admitted to..... (Name of the institution) have noted the content of Prohibition of Ragging Act, 2008(Act No.9 of 2009) and Goa Prohibition of Ragging (Amendment) Act. 2010(Act 17 of 2010) (herein after called the "Act"). Carefully read and fully understood the provisions contained in the said Act.

1. I have in particular. perused clause 2(e) or the Act and am aware as to what constitutes Ragging
2. I have also in particular. perused clause 5 and clause 6 or the Act and am fully aware or the penal and administrative action that is liable to be taken against my ward in case he/she is found guilty of or abetting ragging. actively or passively, or being part of a conspiracy to promote ragging.
3. I hereby solemnly aver and undertake that
 - a) My ward will not indulge in any behavior or act that may be constituted as ragging under clause 2(e) of the Act.
 - b) My ward will not participate in or abet or propagates through any act of commission or omission that may be constituted as ragging under clause 2(e) of the Act.
4. I hereby affirm that. if found guilty of ragging, my ward is liable for punishment according to clause the Act. without prejudice to any other criminal action that may be taken against my ward under any penal law or any law for the time being in force.
5. I hereby declare that my ward have not been expelled or debarred from admission in any institution in country on account of being found guilty of. abetting or being part of conspiracy to promote ragging and further affirm that. in case the declaration is found to be untrue. the admission of my ward is liable to be cancelled

Declared thisday of month of year.

Signature of Deponent

Name:

Address:

Telephone/Mobile No.

Verification

Verified that the contents of this affidavit are true to the best of my Knowledge and no part of the affidavit is false and nothing has been concealed or misstated therein. Verified at.....
(Place) on this the..... (day) of..... month..... (year)

Signature of Deponent

Solemnly affirmed and signed in my presence on this the..... (Day)
of.....month..... (year)..... After reading the contents of this affidavit.

Principal Govt. /Pvt. ITI

ANNEXURE – VIII

List of Job Roles offered at Govt. ITI Under PMKVY-CSSM Scheme.



Sr. No.	TP Name	Job Roles
1	Pernem Govt ITI	Plumber General
2	Mapusa Govt ITI	Hair Stylist
3	Panaji Govt ITI	Assistant Electrician
		Craft Baker
		House Keeping Attendant (Manual Cleaning)
		Plumber General
4	Farmagudi Govt ITI	Plumber General
5	Margao Govt ITI	Domestic Data Entry Operator
		Hand Embroiderer
		Pedicurist & Manicurist
		Plumber General
6	Cacora Govt ITI	Assistant Electrician
		Automotive Service Technician Level 3
		Plumber General
7	Canacona Govt ITI	Automotive Service Technician (Two and Three Wheelers)
		CCTV Installation Technician
		Hand Embroiderer
		Room Attendant
		Trainee Chef
8	Vasco Govt ITI	Plumber General
9	Bicholim Govt ITI	Manual Metal Arc Welding/ Shielded Metal Arc Welding Welder
		Plumber General
10	Sattari Govt ITI	Assembly Operator-RAC
		Gas Tungsten Arc Welding (GTAW)
		Self Employed Tailor

Registrations for training under short term training on first come first serve basis depending on availability of seats as batch sizes are of limited size at respective Govt. ITI.

For more information may Visit <http://www.pmkvyofficial.org/>

SCHEDULE OF ADMISSION PROCESS

Sr. No.	Activity / Event & Places	Date & Time	
1.	Sale of Prospectus at All Govt. ITI s	10.06.2019 onwards	
2.	Last day for receiving Application forms at respective ITI's complete in all respect.	10.07.2019	
3.	Display of Provisional Merit List in ITIs and on the website of Directorate of Skill Development & Entrepreneurship at www.sdct.goa.gov.in	16.07.2019	
4.	Display of Final Merit List in all ITIs and on the website of Directorate of Skill Development & Entrepreneurship at www.sdct.goa.gov.in	19.07.2019	
5.	First Round of Admission at the Centralized Admission Centre Date of admission for candidates belonging to General categories and desirous for seeking admission in courses where the entry qualification is S.S.C/H.S.S.C. From Merit No. 0001 to 0250 0251 to 0500 0501 to 0850 0851 to 1200 1201 to 1550 1551 to 1900 1901 to 2250 2251 and above	Date	Time
		22.07. 2019	10.00 a.m.
		22.07. 2019	02.00 p.m.
		23.07. 2019	10.00 a.m.
		23.07. 2019	02.00 p.m.
		24.07. 2019	10.00 a.m.
		24.07. 2019	02.00 p.m.
		25.07. 2019	10.00 a.m.
		25.07. 2019	02.00 p.m.
6.	First Round of Admission at the Centralized Admission Centre (All General Category VIII Standard pass)	26.07.2019	10.00 am onwards
7.	First Round of Admission at the Centralized Admission Centre (All Reserved category)	29.07.2019	10.00 am onwards 2.30 pm onwards
	1. SSC		
	2. VIII pass		
8.	Second Round of Admission in the ITI on Merit on first cum first serve basis to fill up vacant seats of All Categories	30.07.2019	10.00 am onwards

N.B.:- Vacant seats of reserved categories, if any, shall be allotted to general category at respective ITI's from 31/07/2019 on completion of second round, as per merit and educational qualifications criteria.



GOVERNMENT OF GOA
DIRECTORATE OF SKILL DEVELOPMENT & ENTREPRENEURSHIP

Shram Shakti Bhavan, Patto, Panaji Goa – 403001.

**APPLICATION FORM FOR ADMISSION TO INDUSTRIAL TRAINING INSTITUTE
FOR THE YEAR 2019-2020**

FOR OFFICIAL USE ONLY

Prospectus No. :

Application No.

(to be issued by ITI)

Date:/...../2019

Affix latest
photograph
here

N.B. To be filled in by the candidates in his/her own hand writing using BALL PEN only.

(1) Name of the candidate
Shri. / Kum. / Smt.
(As per Birth Certificate
in capital letters only)

First Name _____
Middle Name _____
Last Name _____

(2) Name of Father/ Guardian: _____

(3) Name of Mother: _____

(4) Date of Birth: _____

(5) Permanent Address: _____ (6) Address for Correspondence: _____

H. No. : _____
Ward : _____
Village/ Town : _____
Taluka : _____
District : _____
Pin Code : _____

(7) Candidate's Tel. No./ Mobile*: _____

E-mail address*: _____

Aadhaar Card No. *: _____

Bank Name: _____ A/c No: _____ IFSC Code: _____

(8) Parent's Contact Details:

Office Address: _____

Mobile No. : _____

Office Ph No.: _____

(9) Tick in the appropriate category in the corresponding boxes. **(Applicable to only those ITIs where there is provision for reservation of seats):**

I belong to General Scheduled Caste Scheduled Tribe Physically Handicapped Person Other Backward Classes Women and Girls Children of Ex-Servicemen Defense Personnel Children of Freedom Fighters Children of Government Employees Children of African Repatriates

EDUCATIONAL QUALIFICATIONS (Minimum Qualifying Examination):

Name of Exam	Total Marks Obtained	Maximum Marks	% of Marks Obtained	Marks Obtained in			No. of Attempts
				Maths	Science	English	
STD 8 TH PASS							
S.S.C.E. PASS							
Diploma in Engineering							
Qualifications other than above							

- (10) Name & Address of School _____
- (11) Name & Address of Higher Secondary School _____
- (12) Name & Address of Polytechnic last attended _____
- (13) List of SELF ATTESTED COPIES OF CERTIFICATES to be attached to this application.
- School/Institute/College Leaving Certificate/Bonafide certificate/Transfer certificate.
 - Statement of marks obtained in VIII Std./ SSC/ Diploma in Engg. as applicable.
 - Certificate of passing VIII std/SSC/Diploma in Engg. as applicable.
 - Certificate regarding residence of 10 years preceding the date of this application or in lieu of this Certificate, documentary evidence highlighted at Clause No. 7.5 of the prospectus would have to be produced.
 - Birth Certificate.
 - Certificate that the candidate's father or mother is an employee of Govt. /Govt. undertaking.(If Applicable)
 - Certificate that the candidate's father or mother is a freedom fighter. (If Applicable)
 - Certificate that the candidate's father or mother is Defense Personnel or Ex-Servicemen. (If Applicable)
 - Certificate that the candidate belongs to Scheduled Caste/ Other Backward Classes. (If Applicable)
 - Certificate regarding candidate being Physically Handicap. (If Applicable)
 - NAC/NTC/course completion certificate of BBT (Applicable for candidates applying for Advanced Modules)
- (14) 2 passport size latest photographs(Affix 01 photograph for Application Form & other for Acknowledgement card of the candidate).
- (15) Candidates selected for admission will have to submit a photograph of their Parents, duly attested by a Gazetted Officer.

UNDERTAKING

I hereby confirm that the information provided above is true. If admitted, I shall deposit the requisite fee and caution money amount as mentioned in this Prospectus to the respective ITI. I shall take proper care of the tools and equipments entrusted to me.

I agree to confirm to the Rules and Regulations presently in force at the Institute or that may be made hereafter for the administration of the Institute. I also undertake that as long as I continue to be a trainee of the Institute, I shall do nothing unworthy of a trainee of the Institute or do anything that will interfere with its orderly working and discipline.

Place: _____

Signature of Candidate

Date: _____

Signature of Parent/ Guardian

N.B.: Application with incomplete information and without self-attested copies of necessary certificates will lead to disqualification and may not be considered.

* *The mobile number and E-mail address has to be mandatory retained by admitted trainees till the completion of course for examination verification and placement tracking purpose for minimum 3 years.*



GOVERNMENT OF GOA

Directorate of Skill Development & Entrepreneurship

ShramShakti Bhavan, Patto, Panaji Goa – 403001.

Affix latest
photograph
here

ACKNOWLEDGEMENT CARD

(For admission to Government & Private Industrial Training Institute: Year 2019-20)

Your application for admission to ITIs has been received in this ITI and the application number is allotted as below:

Application No.: / 2019

Name of ITI:

Date:

Official Seal

Note: to be retained by the candidate till the completion Admission process

.....
Signature

To,

Kum. / Kumari

.....

From,

The Principal

..... Govt. / Pvt. Industrial Training Institute,

.....


DIRECTORATE OF SKILL DEVELOPMENT & ENTREPRENEURSHIP


Shramshakti Bhavan, 3rd Floor, Patto Plaza, Panaji, Goa – 403 001

Weekly Calender August 2019 - July 2020

Week Sr.No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70
2019	AUG - SEPT					SEPT - OCT					OCT - NOV							
MON		5	12	19	26	2	9	16	23	30	7	14	21	28	4	11	18	25
TUE		6	13	20	27	3	10	17	24	1	8	15	22	29	5	12	19	26
WED		7	14	21	28	4	11	18	25	2	9	16	23	30	6	13	20	27
THU	1	8	15	22	29	5	12	19	26	3	10	17	24	31	7	14	21	28
FRI	2	9	16	23	30	6	13	20	27	4	11	18	25	1	8	15	22	29
SAT	3	10	17	24	31	7	14	21	28	5	12	19	26	2	9	16	23	30
Week Sr.No.	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88
2019-20	DEC - JAN					JAN - FEB								MAR - APR				
MON	2	9	16	23	30	6	13	20	27	3	10	17	24	2	9	16	23	30
TUE	3	10	17	24	31	7	14	21	28	4	11	18	25	3	10	17	24	31
WED	4	11	18	25	1	8	15	22	29	5	12	19	26	4	11	18	25	1
THU	5	12	19	26	2	9	16	23	30	6	13	20	27	5	12	19	26	2
FRI	6	13	20	27	3	10	17	24	31	7	14	21	28	6	13	20	27	3
SAT	7	14	21	28	4	11	18	25	1	8	15	22	29	7	14	21	28	4
Week Sr.No.	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54
	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106
2020	APR - MAY								JUN - JUL									
MON	6	13	20	27	4	11	18	25	1	8	15	22	29	6	13	20	27	
TUE	7	14	21	28	5	12	19	26	2	9	16	23	30	7	14	21	28	
WED	8	15	22	29	6	13	20	27	3	10	17	24	1	8	15	22	29	
THU	9	16	23	30	7	14	21	28	4	11	18	25	2	9	16	23	30	
FRI	10	17	24	1	8	15	22	29	5	12	19	26	3	10	17	24	31	
SAT	11	18	25	2	9	16	23	30	6	13	20	27	4	11	18	25		

 Holiday

 Inter ITI Sports

 Annual Exam

N.B.: Some of the public holidays may differ based on Government notifications issued later



Skill India
कौशल भारत - कुशल भारत



DIRECTORATE OF SKILL DEVELOPMENT & ENTREPRENEURSHIP

Shramshakti Bhavan, 3rd Floor, Patto Plaza, Panaji, Goa – 403 001

Ph:(0832) 2437059 / 60 Fax: 2437060