



GOVERNMENT OF INDIA
MINISTRY OF SKILL DEVELOPMENT & ENTREPRENEURSHIP
DIRECTORATE GENERAL OF TRAINING

COMPETENCY BASED CURRICULUM

DENTAL LABORATORY EQUIPMENT TECHNICIAN

(Duration: Two Years)

CRAFTSMEN TRAINING SCHEME (CTS)

NSQF LEVEL- 4



SECTOR – HEALTHCARE

CENTRAL STAFF TRAINING AND RESEARCH INSTITUTE

Kolkata-700091

DENTAL LABORATORY EQUIPMENT TECHNICIAN

(Non-Engineering Trade)

(Revised in August 2025)

Version: 3.0

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Developed By

CENTRAL STAFF TRAINING AND RESEARCH INSTITUTE

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1. COURSE INFORMATION

During the two-year duration of “Dental Laboratory Equipment Technician” trade a candidate is trained on professional skill, professional knowledge and Employability skill related to job roles. In addition to this a candidate is entrusted to undertake project work, extracurricular activities and on job training to build up confidence. The broad components covered under Professional skill subject are as below: -

FIRST YEAR - the trainee will learn about safety and occupational health process. Differentiate between the responsibilities of the dental team providing dental treatment and weigh various metals and alloys used in dental laboratory. Trainee will measure temperature and monitor its effects in dental laboratory and also apply accurate voltage systems required to operate various machines with electrical safety. Establishes relevance of melting points of different alloys used in dental laboratory and also selects various alloys as per requirement for fabrication of dental prosthesis. Identifies various forms of gypsum products, special trays, occlusal runs and articulates casts, retractive components of orthodontic appliances, active components of orthodontic appliances and also prosthesis orthodontic appliances. Trainee will perform teeth setting and also plan and process the denture. Trainee will repair broken denture and relines the denture. Identify and select wires and fabricates retentive components of orthodontic appliances.

The trainee will be able to carve maxillary anterior teeth, mandibular anterior teeth, maxillary premolars, mandibular premolars, maxillary molars, mandibular molars. Trainee will be able to assemble the equipments to be used for duplication of cast. Trainee will be also able to identify and apply various concept of occlusion in all dental casts and also can classify partial denture. Trainee will construct immediate dentures, removable partial dentures and also perform survey and will be able to identify the fixed components of orthodontics appliances. Trainee will fabricate oral screen and activator and also weld appliances.

SECOND YEAR - The trainee will learn how to fabricate temporary acrylic jacket crowns. Trainee will be able to prepare cast and die for fixed partial denture, full metal crown and also full metal bridge.

The trainee will familiarize with equipment used in fixed prosthodontics. Trainee will mock up of anterior crowns, fabricate copings, prepare die and also fabricate porcelain fused to metal crown.

2. TRAINING SYSTEM

2.1 GENERAL

The Directorate General of Training (DGT) under Ministry of Skill Development & Entrepreneurship offers a range of vocational training courses catering to the need of different sectors of economy/ Labour market. The vocational training programmes are delivered under the aegis of Directorate General of Training (DGT). Craftsman Training Scheme (CTS) with variants and Apprenticeship Training Scheme (ATS) are two pioneer schemes of DGT for strengthening vocational training.

‘Dental Laboratory Equipment Technician’ trade under CTS is one of the popular courses delivered nationwide through network of ITIs. The course is of Two years duration. It mainly consists of Domain area and Core area. The Domain area (Trade Theory & Practical) imparts professional skills and knowledge, while Core area (Employability Skills) imparts requisite core skill & knowledge and life skills. After passing out the training program, the trainee is awarded National Trade Certificate (NTC) by DGT which is recognized worldwide.

Candidates need broadly to demonstrate that they are able to:

- Read and interpret technical parameters/ documents, plan and organize work processes, identify necessary materials and tools;
- Perform task with due consideration to safety rules, accident prevention regulations and environmental protection stipulations;
- Apply professional skill, knowledge & employability skills while performing jobs.
- Check the job/ assembly as per drawing for functioning identify and rectify errors in job/ assembly.
- Document the technical parameters related to the task undertaken.

2.2 PROGRESSION PATHWAYS

- Can join industry as Technician and will progress further as Senior Technician, Supervisor and can rise up to the level of Manager.
- Can become Entrepreneur in the related field.
- Can appear in 10+2 examination through National Institute of Open Schooling (NIOS) for acquiring higher secondary certificate and can go further for General/ Technical education.
- Can join Apprenticeship programme in different types of industries leading to National Apprenticeship certificate (NAC).
- Can join Crafts Instructor Training Scheme (CITS) in the trade for becoming instructor in ITIs.
- Can join Advanced Diploma (Vocational) courses under DGT as applicable.

2.3 COURSE STRUCTURE

Table below depicts the distribution of training hours across various course elements during a period of two years: -

S No.	Course Element	Notional Training Hours	
		1 st Year	2 nd Year
1	Professional Skill (Trade Practical)	840	840
2	Professional Knowledge (Trade Theory)	240	300
3	Employability Skills	120	60
Total		1200	1200
On the Job Training (OJT)/ Group Project *		150	150
Optional Courses**		240	240
Grand Total		1590	1590

* The trainee has to undergo 150 hours of mandatory OJT (On the Job Training) at nearby industry or wherever industry not available then group project has to be done with the supervision of the trade instructor for every year.

** Trainees of one-year or two-year trade can also opt for optional courses of up to 240 hours in each year for obtaining 10th/ 12th class certificate from NIOS along with ITI certification, or, short term courses for extra skills/knowledge.

2.4 ASSESSMENT & CERTIFICATION

The trainee will be tested for his/her skill, knowledge and attitude during the period of course through formative assessment and at the end of the training programme through summative assessment as notified by the DGT from time to time.

a) The **Internal Assessment** during the period of training will be done by **Formative Assessment Method** by testing for assessment criteria listed against learning outcomes. The training institute have to maintain individual *trainee portfolio* as detailed in assessment guideline. The marks of internal assessment will be as per the formative assessment template provided on www.cstaricalcutta.gov.in or www.bharatskills.gov.in.

b) The final assessment will be in the form of summative assessment method. The All India Trade Test for awarding NTC will be conducted by DGT as per the guideline of Govt. of India. The pattern and marking structure is being notified by Govt. of India from time to time. **The learning outcome and assessment criteria will be basis for setting question papers for final**

assessment. The examiner during final examination will also check individual trainee's profile as detailed in assessment guideline before giving marks for practical examination.

2.4.1 PASS REGULATION

For the purposes of determining the overall result, weightage of 100% is applied for six months and one year duration courses and 50% weightage is applied to each examination for two years courses. The minimum pass percentage for Trade Practical and Formative assessment are 60% & for all other subjects is 33%.

2.4.2 ASSESSMENT GUIDELINE

Appropriate arrangements should be made to ensure that there will be no artificial barriers to assessment. The nature of special needs should be taken into account while undertaking assessment. Due consideration should be given while assessing for teamwork, avoidance/reduction of scrap/wastage and disposal of scrap/wastage as per procedure, behavioral attitude, sensitivity to environment and regularity in training. The sensitivity towards Occupational Safety, Health and Environment (OSHE) and self-learning attitude are to be considered while assessing competency.

Assessment will be evidence based, comprising some of the following:

- Job carried out in labs/workshop
- Record book/ daily diary
- Answer sheet of assessment
- Viva-voce
- Progress chart
- Attendance and punctuality
- Assignment
- Project work
- Computer based multiple choice question examination
- Practical Examination

Evidences and records of internal (Formative) assessments are to be preserved until forthcoming examination for audit and verification by examination body. The following marking pattern to be adopted for formative assessment:

Marks Allotted during Assessment	Performance Level	Evidence
Marks between 60% to 75%	For performance in this grade, the candidate should produce work which demonstrates attainment of an acceptable standard of craftsmanship	• Demonstration of good skill in the use of hand tools, machine tools and workshop equipment. • 60-70% accuracy achieved while

	with occasional guidance, and due regard for safety procedures and practices.	undertaking different work with those demanded by the component/job. • A fairly good level of neatness and consistency in the finish. • Occasional support in completing the project/job.
Marks above 75% to 90%	For this grade, a candidate should produce work which demonstrates attainment of a reasonable standard of craftsmanship, with little guidance, and regard for safety procedures and practices.	• Good skill levels in the use of hand tools, machine tools and workshop equipment. • 70-80% accuracy achieved while undertaking different work with those demanded by the component/job. • A good level of neatness and consistency in the finish. • Little support in completing the project/job.
Marks Above 90%	For performance in this grade, the candidate, with minimal or no support in organization and execution and with due regard for safety procedures and practices, has produced work which demonstrates attainment of a high standard of craftsmanship.	• High skill levels in the use of hand tools, machine tools and workshop equipment. • Above 80% accuracy achieved while undertaking different work with those demanded by the component/job. • A high level of neatness and consistency in the finish. • Minimal or no support in completing the project.

3. JOB ROLE

Brief Description of Job Roles:

Dental Prosthetic Technicians; Medical and Dental Prosthetic Technicians design, fit, service and repair medical and dental devices and appliances following prescriptions or instructions established by a health professional. They may service a wide range of support instruments to correct physical medical or dental problems such as neck braces, orthopedic splints, artificial limbs, hearing aids, arch supports, dentures, and dental crowns and bridges.

Mechanic, Dental; Dental Technician makes full or partial dentures, inlay, bridges, and crowns of metal, vulcanite or other composition plates from wax or plaster plate impressions taken by DENTIST and repairs dental aids as prescribed by him. Makes special impression trays as designed by DENTIST and prepares plaster casts of upper and lower jaws from wax impression taken by him to provide pattern for work to be done. Shapes metal vulcanite or plastic plates for dentures and sets artificial teeth in plates. Processes denture in acrylic resin or metal and makes fixed metal restorations such as crowns, bridges etc. according to impression taken by Dentist. Forms porcelain teeth and crowns and repairs or makes additions on existing dentures as directed. May assist Dentist in general dental practice and undertake chair side clinical work on patients.

Reference NCO-2015:

- (i) 3214.9900 - Medical and Dental Prosthetic Technicians
- (ii) 3214.0100 - Dental Mechanic

4. GENERAL INFORMATION

Name of the Trade	Dental Laboratory Equipment Technician
Trade Code	DGT/1047
NCO - 2015	3214.9900, 3214.0100
NSQF Level	Level-4
Duration of Craftsmen Training	Two Years (2400 hours + 300 hours OJT/Group Project)
Entry Qualification	Passed 10 th class examination
Minimum Age	14 years as on first day of academic session.
Eligibility for PwD	NIL
Unit Strength (No. of Student)	24 (There is no separate provision of supernumerary seats)
Space Norms	120 Sq. m
Power Norms	12 KW
Instructors Qualification for:	
(i) Dental laboratory Equipment Technician	One Qualified Dental Surgeon and One Qualified Dental & Laboratory Technician <u>Essential Qualification:</u> Regular / RPL variants of National Craft Instructor Certificate (NCIC) in Dental Laboratory Equipment Technician trade <i>Note: Out of two Instructors required for the unit of 2 (1+1), one must have Degree/Diploma and other must have NTC/NAC qualifications.</i>
(ii) Employability Skill	MBA/ BBA / Any Graduate/ Diploma in any discipline with Two years' experience with short term ToT Course in Employability Skills conducted by DGT institutions. (Must have studied English/ Communication Skills and Basic Computer at 12th / Diploma level and above) OR Existing Social Studies Instructors in ITIs with short term ToT Course in Employability Skills conducted by DGT institutions.
(iii) Minimum age for Instructor	21 years
List of Tools and Equipment	As per Annexure – I

5. LEARNING OUTCOME

Learning outcomes are a reflection of total competencies of a trainee and assessment will be carried out as per the assessment criteria.

5.1 LEARNING OUTCOMES

Sl. No.	Learning Outcome	Duration		
		Practical	Theory	Total
First Year				
1.	Apply occupational health safety protocols and differentiate dental team responsibilities to ensure safe dental treatment.	25	5	30
2.	Weigh various metals and alloys used in dental laboratory and also measure temperature and monitor its effects in dental laboratory.	25	5	30
3.	Establishes relevance of melting point of different alloys used in dental laboratories.	25	5	30
4.	Apply accurate voltage system required to operate various machines with electrical safety.	25	5	30
5.	Select various alloys as per requirement for fabrication of dental prosthesis.	25	5	30
6.	Manipulate and use gypsum products efficiently and dental cement effectively.	50	10	60
7.	Manipulates and uses dental waxes and impression materials and uses dental based materials effectively.	25	5	30
8.	Make diagnostic and master casts, special trays and occlusal rims and articulates casts.	80	25	105
9.	Perform teeth setting.	45	15	60
10.	Plan and process the denture and also repair broken denture and reline the denture.	60	15	75
11.	Identify and select wires and fabricates retentive components of orthodontic appliances and make retractive components of orthodontic appliances.	50	10	60
12.	Make active components of orthodontic appliances and prosthesis orthodontic appliances.	45	15	60
13.	Carve various maxillary anterior teeth, mandibular anterior teeth, maxillary premolar, mandibular premolar, maxillary molars and mandibular molars.	155	55	210

14.	Duplication of casts.	25	5	30
15.	Identify and apply various concepts of occlusion in all dental casts.	25	5	30
16.	Identify partial denture classification; construct immediate and removable partial dentures; and survey removable partial dentures.	70	20	90
17.	Prepare appropriate retention features in removable partial dentures.	20	10	30
18.	Identify the fixed components of orthodontic appliances and fabricate oral screen, activator and weld appliances.	65	25	90
Employability Skills			120	120
Total		840	360	1200
Second Year				
19.	Fabricate temporary acrylic jacket crowns.	70	20	90
20.	Prepare various cast, die for fixed partial denture.	120	45	165
21.	Prepare various cast, die for full metal crown.	150	45	195
22.	Prepare various cast, die for full metal bridges.	100	50	150
23.	Familiarize with equipment used in fixed prosthodontics and mockup of anterior crowns.	125	40	165
24.	Fabricate copings and prepare die.	125	40	165
25.	Fabricate porcelain fused to metal crown & metal free crowns.	150	60	210
Employability Skills			60	60
Total		840	360	1200
Grand Total		1680	720	2400

6. ASSESSMENT CRITERIA

LEARNING OUTCOMES	ASSESSMENT CRITERIA
FIRST YEAR	
1. Apply occupational health safety protocols and differentiate dental team responsibilities to ensure safe dental treatment.	• Practice individual responsibility in relation to maintaining workplace health safety and security requirements. • Comply with health, safety and security procedures for the work place. • Report and identify breaches in health, safety and security procedures to the designated persons. • Identify potential hazards at work place. • Complete any health and safety records accurately. • Maintain personal hygiene and contribute effectively and actively to the health check ecosystem. • Identify different team members working in a dental set up. • Establish appropriate communication with the different persons designated to perform different tasks in a dental set up. • Seek supervision for the work to be performed from suitable and designated professional of the dental team. • Maintain competence within the role and field of practice.
2. Weigh various metals and alloys used in dental laboratory and also measure temperature and monitor its effects in dental laboratory.	• Identify appropriate metal and alloys used in dental laboratories. • Prepare and calibrate equipment for weighting. • Properly measures desired amount of metal or alloy required to make or prosthesis. • Avoid wastage of metal and alloys. • Record the weighed alloy legibly and correctly. • Read temperature efficiently and records it legibly in the book. • Interpret the effects of change in temperature in dental laboratory towards the processing of prosthesis. • Identify temperature of environment and modifies the techniques as per requirement.
3. Establishes relevance of melting points of different alloys used in dental laboratory.	• Interpret the significance of melting point of alloys which are used in dental laboratory. • Choose the alloy used for casting various prosthesis in dental laboratory. • Match the coefficient of thermal expansion of alloys with the ceramic system.
4. Apply accurate voltage system required to	• Identify the power consumption of every equipment. • Read the power output to the machines.

operate various machines with electrical safety.	• Recognize appropriate voltage stabilizers installed with the equipment. • Switch off the machines during interrupted power supplies. • Report the power setbacks to the concerned authority. • Identify electrical hazards which can occur in a dental laboratory. • Operates all electrical equipment by observing safety procedure. • Manage electrical fires or short circuits. • Administer first aid for electrical burns and shock
5. Selects various alloys as per requirement for fabrication of dental prosthesis.	• Identify different alloy systems used in dentistry. • Interpret physical and mechanical properties of various alloy used in dentistry. • Select the appropriate alloy for a specific prosthesis to be fabricated. • Read and apply specific manipulating instruction supplied along with the alloy from the manufactures.
6. Manipulate and use gypsum products efficiently and dental cement effectively.	• Identify various forms of gypsum products used in dentistry. • Follow instructions for manipulation for gypsum products. • Select appropriate gypsum product to be used for a specific purpose in dental laboratory. • Apply mixing ratio of powder and liquid, mixing time, working time and setting time appropriately. • Alter the properties of gypsum products by adding accelerators and retarders. • Identify dental cements used in dentistry. • Arrange all materials to be used while mixing. • Interpret about the properties of dental cements. • Interpret the application of individuals cement. • Manipulate the cements according to manufacturer's instructions. • Load the material efficiently and carefully for transfer.
7. Manipulates and uses dental waxes and impression materials and uses dental based materials effectively.	• Identify various types of waxes used in dental laboratory. • Interpret the properties of dental waxes used in dentistry. • Use appropriate armamentarium used to manipulate waxes. • Manipulate the waxes efficiently. • Maintain uniform heating of waxes. • Store the work done with wax at appropriate temperature. • Identify the impression materials used in dentistry. • Arrange appropriate armamentarium used to manipulate impression materials. • Identify the properties of dental impression materials.

	• Load the impression materials. • Handle impressions carefully to avoid distortion. • Disinfect impressions carefully. • Store impressions as recommended. • Interpret the use of denture base materials. • Interpret the properties of denture base materials. • Read manufacturer's instructions carefully. • Manipulate the denture base materials as per recommended instructions to avoid bubbles. • Store the denture base materials at appropriate temperatures. • Avoid contamination of denture base materials while manipulating.
8. Make diagnostic and master casts, special trays and occlusal rims and articulates casts.	• Disinfect the impression while observing not to distort the impression thoroughly understands all the instruction provided by dentistry. • Identify the materials and equipment required for preparing the cast. • Prepare equipment and materials required to fabricate cast. • Prepare master cast using approved die stone free of bubble void or damage. • Produce opposing cast using approved base fore with approved stone, free of bubble, void or damage. • Trim the cast to produce finished cast • Examine the cast carefully to notice any defect in the cast. • Identify the purpose of special trays. • Assemble all equipment and armamentarium used to make special tray. • Apply separating medium properly on cast. • Adapt spacer on the cast efficiently. • Use raw material if indicioucly avoiding wastage. • Fabricate special tray on the cast both upper and lower. • Identify anatomical landmarks of the cast both maxillary and mandibular. • Terms and finishes the specials tray smoothly. • Avoid incorporation of any defects while fabricating special tray. • Interpret the significance of making occlusal rims. • Elaborate the concept of jaw relation. • Identify the dimensions of maxillary and mandibular rims. • Articulate the casts with the rims on the desired articulator. • Check the articulator accuracy before mounting the casts. • Follow planes of occlusion while articulating the casts.

9. Perform teeth setting.	• Select teeth according to the requirements of the dentist. • Seek communication with the dentist to confirm the teeth selected. • Apply the principles of anterior teeth setting. • Apply the principles of posterior teeth setting. • Apply the concepts of occlusion and its various types. • Does teeth setting on the occlusal rims and incorporates functional principles of teeth setting. • Produce gum patterns in wax. • Produce a neat finish in teeth setting and wax up.
10. Plan and process the denture and also repair broken denture and reline the denture.	• Select the appropriate size of flasks for the denture to be processed. • Assemble all equipment and raw material required for denture processing. • Flask the denture carefully in flasks • Apply separating medium carefully • Dewax the denture maintaining intact position of the teeth in the flask. • Mix heat cure powder and liquid in appropriate ratio. • Pack heat cure dough into the flask. • Remove all flash while packing. • Acrylize the denture at the desired temperature and at the chosen cycle. • De-flask denture after bench cooling. • Return the dentures from the flask efficiently. • Trim the denture as desired to produce finished surface. • Polish the denture to make a polished denture free of all defects. • Assess whether the broken denture can be repaired or not. • Assemble and seat all parts of broken denture on the cast. • Inform the dentist about the success probabilities to repair. • Carry out procedure of repair the denture as desired. • Select the raw material required to repair the denture as to closely match the material with the previous material used. • Produce a finished and polished repaired denture. • Apply the concept of relining of denture. • Seat denture to be relined on new cast.
11. Identify and select wires and fabricates retentive components of orthodontic appliances and make	• Select the appropriate gauge of wire for making desired components of clasp. • Make pin bead clasp. • Adapt C clasp. • Make Adam's clasp.

retractive components of orthodontic appliances.	• Hold the armamentarium properly • Seat the components on the cast • Differentiate between retentive and retractive components of appliances. • Apply the concept of retractive components and can activate their working. • Make labial bows of both long and short types. • Adapt labial bows well on the surface of the cast. • Use appropriate wire for their fabrication.
12. Make active components of orthodontic appliances and prosthesis.	• Apply the concept of active components and can activate their working. • Identify wires and use them for their fabrication. • Make all types of springs. • Adapt all types of springs on the surface of the cast. • Fabricate all the components of the desire appliances. • Assemble all the components of the appliance on the surface of the cast. • Fabricate simple retention plate (Hawley's retention appliances). • Fabricate tongue thrusting appliances. • Fabricate expansion screw appliances. • Acrylics the appliance free of defects. • Finish and polishes the appliances.
13. Carve various maxillary anterior teeth, mandibular anterior teeth, maxillary premolar, mandibular premolar, maxillary molars and mandibular molars.	• Show the placement of maxillary anterior teeth in the mouth. • Demonstrate the detailed anatomy of central incisor, lateral incisor and canine. • Identify the dimensions of central incisor, lateral incisor and canine. • Carve maxillary central incisor on wax block and reproduce all anatomical landmarks on the wax block. • Carve maxillary lateral incisor on wax block and reproduces all anatomical landmarks on the wax block. • Carve canine on the block and reproduces all anatomical landmarks on the wax block. • Demonstrate the placement of all mandibular anterior teeth • Demonstrate the detailed anatomy of all mandibular anterior teeth. • Demonstrate the dimensions of all mandibular anterior teeth. • Carve mandibular central mandibular and reproduce all anatomical landmarks on the wax block. • Curve mandibular canine and reproduces all anatomical landmarks on the wax blocks.

	• Demonstrate the placement of maxillary premolar in the mouth. • Demonstrate the detailed anatomy of maxillary first and second premolar. • Demonstrate the dimension of maxillary premolar. • Cause maxillary first premolar and reproduces all anatomical landmarks on the wax block. • Cause maxillary second premolar and reproduces all anatomical landmarks on the wax block. • Demonstrate the placement of mandibular premolars in the mouth. • Demonstrate the detailed anatomy of mandibular premolar first and second. • Demonstrate the dimensions of mandibular premolars. • Carve mandibular first premolar and reproduces all anatomical landmarks on the wax block. • Carve mandibular second premolar and reproduces all anatomical landmarks on the wax block. • Demonstrate the placement of all maxillary molars in the mouth. • Demonstrate the detailed anatomy of all maxillary molars. • Carve maxillary first molar and reproduces all anatomical details on the wax block. • Carve maxillary second molar and reproduces all anatomical details on the wax block. • Demonstrate the placement of all maxillary molars in the mouth. • Demonstrate the detailed anatomy of all mandibular molars. • Demonstrate the dimensions of all mandibular molars. • Carve mandibular first molar and reproduces all anatomical details on the wax block. • Carve mandibular second molar and reproduces all anatomical details on the wax block.
14. Duplication of casts.	• Demonstrate material agar-agar. • Assemble the equipments to be used for duplication of cast. • Examine the master cast to be duplicated. • Trim and finishes the cast.
15. Identify and apply various concepts of occlusion in all dental casts.	• Interpret the term occlusion. • Classify occlusion can classify casts based on occlusion. • Understands various curves of occlusion. • Can reproduce desired occlusion patterns in the casts.
16. Identify partial denture classification;	• Differentiate between partial dentures and complete dentistry. • Classify partial denture.

construct immediate and removable partial dentures; and survey removable partial dentures.	• Use Kennedy's classification system. • Apply applegate's rules of application to kennedy system of classification. • Interpret the concept and indications of immediate dentures. • Demonstrate the complete process of immediate dentures on partial dentures. • Assemble all armamentarium required to make immediate dentures. • Fabricate immediate denture. • Finish and polishes immediate denture. • Interpret the principles involved in the fabrication of partial denture. • Design partial denture to be fabricated to meet aesthetic and functional needs. • Examine the master cast on which removable partial denture would be fabricated. • Duplicate removable partial denture following all metal steps sequentially. • Finish and polishes fabricated removal partial denture. • Identify surveyor and all its parts. • Survey the master cast with all the lines and marks them properly on the working cast.
17. Prepare appropriate retention features in removable partial dentures.	• Demonstrate about the structure features and components to be incorporated in the removable partial denture. • Design sleek and appropriate related features as per requirement of the prosthesis. • Incorporate these features in the cast.
18. Identify the fixed components of orthodontic appliances and fabricate oral screen, activator and weld appliances.	• Demonstrate about removable and fixed orthodontics and difference between them. • Identify the fixed components of fixed orthodontics like bands, arches, brackets etc. • Demonstrate the construction of bands, tubes arches and brackets etc. • Demonstrate about myofunction appliances. • Assemble armamentarium necessary for making oral screen and activator. • Examine casts and occludes them in accurate position for both the arches. • Adapt wire bending required. • Acrylize the prosthesis. • Finish and polish the prosthesis.

	• Interpret welding and spot welding and the difference between them. • Assemble the equipments and raw material required to do welding. • Assemble the parts to be welded. • Perform welding. • Finishe and polishes the appliances.
SECOND YEAR	
19. Fabricate temporary acrylic jacket crowns.	• Apply the term temporary a jacket crowns. • Examine the cast for accuracy for making jacket crowns • Wax up the tooth with modelling wax to full anatomic contour. • Make putty wax index • Flask the crown appropriately dewaxes the crown. • Select appropriate shade for packing. • Acrylize the crown. • Finishes the crown. • Identify the material (protemp) used for making temp crowns.
20. Prepare various cast, die for fixed partial denture.	• Pour the cast in die stone. • Trim the cast and marks the pinning points on the cast. • Pin the cast. • Die cuts the cast. • Ditches the die. • Apply die hardener spacer and separator. • Carry out complete process of making metal crowns. • Examine the cast for accuracy. • Wax up the crown to full anatomic crown. • Sprue the crown at the desired surface. • Invest the crown in the investing ring. • Select the appropriate investment material. • Cast the units with appropriate alloy. • Divest the investing ring. • Trim and finishes the crowns polish the crown. • Differentiate between full unit metal and three Unit Bridge. • Examine the cast for accuracy. • Wax up the cast for three Unit Bridge to full anatomic contour. • Design suitable pontics. • Select appropriate connector design. • Sprue the bridge at the desired surface. • Invest the bridge in the investing ring. • Select the appropriate investment material. • Cast the units with appropriate alloy. • Divest the investing ring.
21. Prepare various cast, die for full metal crown.	
22. Prepare various cast, die for full metal crown.	

	• Trim and finishes the bridge. • Polish the bridge.
23. Familiarize with equipment used in fixed prosthodontics and mock up of anterior crowns.	• Identify the equipment utilized in fixed prosthodontics. • Handle the equipment according to manufacturer instructions. • Operate the equipment smoothly. • Record the breakdowns of the apparatus and informs the authorized authorities. • Understand the term mock up and its relevance. • Know the anatomy of the tooth/ teeth to be mocked up. • Analyse the cast for accurateness and free of defects before starting mock up. • Assemble all equipment, tools and raw materials for mock up. • Perform mock-up of desired teeth.
24. Fabricate copings and prepare die.	• Identify the term metal substructure or copings. • Identify where copings are desired. • Design the copings according to the requirement of the cast. • Check the cast of accuracy assembles desired armamentarium. • Manipulate blue inlay wax techniques and adapts it well to make wax copings. • Make proper collar in wax and seals the cervical outline efficiently. • Space the copings at the prescribed area. • Invest the copings in the investing ring of right size chooses appropriate investment material. • Cast the copings with suitable alloy. • Trim and finishes the copings by sequentially using the desired Equipments. • Identify the purpose of cutting the cast into die. • Assemble armamentarium required for die cutting the die. • Trim the cast, indexes the cast. • Pin the cast. • Cut the die, ditches the die. • Seal the defects of the cast if any after communicating with the dentist. • Apply die hardener, spacer and separator in the layers.
25. Fabricate porcelain fused to metal crown & metal free crowns.	• Identify the types of fixed crowns that are made. • Identify the steps and process to fabricate different types of crowns. • Select appropriate ceramic systems & shades, oxidises the copings.

	• Apply opaque and wash opaque smoothly and fires at right temperature in the porcelain furnace. • Apply dentin on the opaque layer fired. • Hold the crown properly while firing • Assess if 2nd build up and firing is required dentin. • Apply enamel and finishes the crown with ceramic finishing burs. • Glaze the crown. • Identify the types of metal free restorations and has a brief know-how of the procedures used to fabricate the crown.

7. TRADE SYLLABUS

SYLLABUS FOR DENTAL LABORATORY EQUIPMENT TECHNICIAN TRADE			
FIRST YEAR			
Duration	Reference Learning outcome	Professional Skills (Trade Practical)	Professional Knowledge (Trade Theory)
Professional Skill 25 Hrs.; Professional Knowledge 05 Hrs.	1. Apply occupational health safety protocols and differentiate dental team responsibilities to ensure safe dental treatment.	1. Make a flowchart of various professionals working in dental hospitals, clinics and laboratories indicating their hierarchy. 2. Tabulate various branches of Dentistry indicating places where they are commonly found working and the kind of work they do. 3. Draw a neat sketch of Department in your institute and label various sections. 4. Tabulate various departments and paste the photographs of various machines and equipment used in different sections of laboratories and label them. Write safety precautions while handling each equipment below it. 5. Identify and demonstrate use of various safety precaution devices. Paste their photographs	• Introduction to various courses/branches of Dentistry. • Role and responsibilities of Dental Technicians. • Familiarisation of the institute. • Safety precautions to be observed during handling of chemicals, laboratory equipment and machines.

		in your workbook.	
Professional Skill 25 Hrs.; Professional Knowledge 05 Hrs.	2. Weigh various metals and alloys used in dental laboratory and also measure temperature and monitor its effects in dental laboratory.	6. Familiarization and demonstration of the use of weighing machines and weights. Practice on weighing correct to milligram. 7. Prepare a chart of various scales and their conversions used for measuring temperature. 8. Identify and paste photographs of various temperature measuring devices.	Study of density, specific gravity, properties of matter, cohesion, viscosity, elasticity, diffusion and osmosis. Study of Temperature, temperature measurements, temperature measuring instruments & thermostats.
Professional Skill 25 Hrs.; Professional Knowledge 05 Hrs.	3. Establish relevance of melting points of different alloys used in dental laboratory.	9. Tabulate melting point of various alloys used in dental laboratories. 10. Simple practical on heat transfer and conduction & convection.	Boyle's Law and Charles Law, unit of heat, latent heat, melting point, expansion of solids, liquids and gases by heat. Study of Gas pressure and properties of vapours, conduction, convection and radiation.
Professional Skill 25 Hrs.; Professional Knowledge 05 Hrs.	4. Apply accurate voltage system required to operate various machines with electrical safety.	11. Practice on measuring voltage & current (Both AC & DC). 12. Demonstrate and Prepare chart on electrical safety reflecting important instructions	Study of Ohm's Law, Electrical Measurement and measuring instruments i.e. Voltmeter, Ammeters etc. Electrical safety, Low voltage systems, Necessity of Earthing.
Professional Skill 25 Hrs.; Professional Knowledge 05 Hrs.	5. Select various alloys as per requirement for fabrication of dental prosthesis.	13. Tabulate physical properties of elements, mixtures and compounds. 14. Draw a well labelled diagram of electrolysis theory.	Study of work, power and energy, power, friction, momentum, centre of gravity, types of lever, stress, strain, shearing strain, torsion, mechanical properties of metals.

		15. Tabulate various physical properties of metals used in dentistry.	Physical and chemical changes of elements, mixtures and compounds. Oxides, burning, rusting. Electrolysis, ionic theory of solution, electro potential, Electroplating General characteristics of common metal used in the dental work and their compounds.
Professional Skill 50 Hrs.; Professional Knowledge 10 Hrs.	6. Manipulate and use gypsum products efficiently and dental cement effectively.	16. Identify various gypsum products. 17. Manipulate various gypsum products. 18. Tabulate various gypsum products, their mixing time, working and setting time. 19. Manipulate dental cements.	Study of dental materials- Gypsum products. Study of dental material: - Dental cements.
Professional Skill 25 Hrs.; Professional Knowledge 05 Hrs.	7. Manipulates and uses dental waxes and impression materials and uses dental based materials effectively.	20. Identify various dental waxes. 21. Manipulate sticky, modeling and blue inlay wax. 22. Manipulate impression material. 23. Manipulation of alginate. 24. Manipulate usage of self-cure acrylic resins. 25. Manipulate and use heat cure acrylic resins. 26. Tabulate differences between self-cure and heat cure acrylic resins.	Study of dental waxes. Study of impression materials. Study of denture base materials.
Professional Skill 80 Hrs.;	8. Make diagnostic and master casts, special trays and occlusal rims	27. Fabricate diagnostic and master casts. 28. Practice Boxing of	Explain fabrication and preservation of casts, Boxing in and trimming of casts.

Professional Knowledge 25 Hrs.	and articulates casts.	impression. 29. Practice Trimming of casts. 30. Make special trays with spacers. 31. Prepare Base Adapting plates. 32. Make upper occlusal rims. 33. Make lower occlusal rims. 34. Articulate upper and lower casts.	Explain denture bases like base plates. Theory of occlusal rims and articulation.
Professional Skill 45 Hrs.; Professional Knowledge 15 Hrs.	9. Perform teeth setting.	35. Prepare and set upper teeth. 36. Prepare and set lower teeth. 37. Perform Wax up for try in.	Selection of teeth and principles of teeth setting.
Professional Skill 60 Hrs.; Professional Knowledge 15 Hrs.	10. Plan and process the denture and also repair broken denture and reline the denture.	38. Perform flasking of denture. 39. Carry out Dewaxing of denture. 40. Perform Acrylization of denture. 41. Perform Deflasking of denture. 42. Carry out trimming of denture. 43. Carry out finishing of denture 44. Perform polishing of denture. 45. Repair the broken denture. 46. Perform the relining of the denture.	Explain and discuss Acrylization of denture. Explain and discuss repair & relining of denture.
Professional Skill 50 Hrs.;	11. Identify and select wires and fabricates	47. Carry out straightening of wire.	Explain orthodontics, Principles of wire bending and

Professional Knowledge 10 Hrs.	retentive components of orthodontic appliances and make retractive components of orthodontic appliances.	48. Fabricate clasps. 49. Fabricate labial bows short and long.	retention components. Explain Retraction components.
Professional Skill 45 Hrs.; Professional Knowledge 15 Hrs.	12. Make active components of orthodontic appliances and prosthesis orthodontic appliances.	50. Fabricate various springs. 51. Fabricate simple retention appliance. 52. Fabricate retraction appliance. 53. Fabricate tongue thrusting appliance. 54. Fabricate expansion screw appliance. 55. Perform Finishing and polishing of appliance.	Explain various springs –active components. Explain Acrylization of various orthodontic appliances.
Professional Skill 155 Hrs.; Professional Knowledge 55 Hrs.	13. Carve various maxillary anterior teeth, mandibular anterior teeth, maxillary premolar, mandibular premolar, maxillary molars and mandibular molars.	56. Carving of teeth in wax maxillary anterior teeth. 57. Carve mandibular anterior teeth. 58. Carve maxillary premolars. 59. Carve mandibular premolars. 60. Carve maxillary molars. (25Hrs.) 61. Carving of mandibular molars.	Human dentition. Nomenclature of teeth. Tooth morphology basic terminology. Tooth morphology maxillary anterior teeth. Morphology lower anterior teeth. Morphology Maxillary premolars Muscles of mastication. Morphology Mandibular Premolars Morphology Maxillary molars Muscles of deglutination. Muscles of facial expression. • Morphology mandibular molars • Phonetics • TMJ
Professional	14. Duplication of casts.	62. Cast duplication and	Explain Cast duplication

Skill 25 Hrs.; Professional Knowledge 05 Hrs.		trimming and finishing of casts.	material.
Professional Skill 25 Hrs.; Professional Knowledge 05 Hrs.	15. Identify and apply various concepts of occlusion in all dental casts.	63. Demonstrate various concepts of occlusion. 64. Demonstrate curve of monsoon and wilson + anterior guidance. 65. Make table on concept of Balanced Occlusion.	Explain on Occlusion Theory.
Professional Skill 70 Hrs.; Professional Knowledge 20 Hrs.	16. Identify partial denture classification; construct immediate and removable partial dentures; and survey removable partial dentures.	66. Practice by drawing and labelling all forms of Kennedy's classification. 67. Construct immediate Denture. 68. Fabricate Partial Denture. 69. Practice by drawing and labelling various parts of surveyor. 70. Survey the Cast.	Kennedy's classification of Partial Denture. Immediate Denture. Principles of Partial Denture Design. Explain Surveyor and principles of Surveying.
Professional Skill 20 Hrs.; Professional Knowledge 10 Hrs.	17. Prepare appropriate retention features in Removable partial dentures.	71. Prepare and incorporate clasps in Removable Partial Denture.	Preparation of Clasps for Removable Partial Denture.
Professional Skill 65 Hrs.; Professional Knowledge 25 Hrs.	18. Identify the fixed components of orthodontic appliances and fabricate oral screen, activator and weld appliances.	72. Demonstrate construction of Bands, Tubes and Arches lingual Bars. 73. Construct Activator. 74. Construct Oral Screen. 75. Practice on welding and spot welding.	Introduction to fixed orthodontic Bands, Arches and Tubes. Oral Screen and Activator Orthodontic appliances. Welding and Spot welding. Tarnish and Corrosion. Prepare presentation on use of latest equipment.

Project work / Hospital visit

Broad Areas:

- a) Carving of teeth in wax maxillary anterior teeth.
- b) Practice by drawing and labelling various parts of surveyor.
- c) Fabricate partial denture.
- d) Prepare and incorporate clasps in Removable Partial Denture.
- e) Practice on welding and spot welding.
- f) Make table on concept of Balanced Occlusion.

SYLLABUS – DENTAL LABORATORY EQUIPMENT TECHNICIAN			
SECOND YEAR			
Duration	Reference Learning outcome	Professional Skills (Trade Practical)	Professional Knowledge (Trade Theory)
Professional Skill 70 Hrs.; Professional Knowledge 20 Hrs.	19. Fabricate temporary acrylic Jacket crowns.	76. Fabricate temporary Acrylic Crown Anterior. 77. Fabricate temporary Acrylic Crown Posterior. 78. Fabricate temporary Acrylic 3 Unit Bridges.	Temporary Acrylic Crowns.
Professional Skill 120 Hrs.; Professional Knowledge 45 Hrs.	20. Prepare various cast, die for fixed partial denture.	79. Manipulate Blue Inlay Wax. 80. Perform Cast Pouring and Trimming for Fixed Partial Denture. 81. Prepare Die for Fixed Partial Denture. 82. Application of Spacer and Hardener.	Blue Inlay wax. Casts preparation for fixed partial Dentures. Die and die preparation. Spacer and Hardener.
Professional Skill 150 Hrs.; Professional Knowledge 45 Hrs.	21. Prepare various cast, die for full metal crown.	83. Plan and execute full metal wax up of Maxillary Premolars. 84. Plan and execute full metal wax up of mandibular premolar. 85. Plan and execute full metal wax up of molars 86. Carry out spruing full metal restorations 87. Carry out Investing of full metal restorations. 88. Prepare and cast full metal restorations. 89. Perform divesting full of metal restorations. 90. Carryout trimming of full metal restorations. 91. Carryout Polishing full metal restorations.	Wax up Full Metal Crowns. Spruing, Investing Full Metal restorations.
Professional Skill 100 Hrs.; Professional	22. Prepare various cast, die for full metal bridges.	92. Plan and Prepare cast and die for bridge. 93. Carry out Wax up full Metal three Unit Bridge.	Introduction to casting machine and principles of casting.

Knowledge 50 Hrs.		94. Perform Spruing, Investing, Casting and Divesting Bridge. 95. Carry out Trimming, Finishing and Polishing of three units full Metal Restoration.	
Professional Skill 120 Hrs.; Professional Knowledge 50 Hrs.	23. Familiarize with equipment used in fixed prosthodontics and mock-up of anterior crowns.	96. Operates all equipment used in fixed prosthodontics. 97. Handle all equipment according to manufacturer's instructions. 98. Mock-up of anterior crowns for porcelain fused to metal and metal free crowns.	Identification application and operation of equipment necessary in the fabrication of prosthesis Differences b/w fixed and removable prosthodontics Mock up and its importance.
Professional Skill 125 Hrs.; Professional Knowledge 40 Hrs.	24. Fabricate copings and prepare die.	99. Wax up for copings 100. Wax up copings for ceramic facings. 101. Spruing for copings 102. Casting copings 103. Devesting copings 104. Trimming, finishing and polishing of copings. 105. Trims the cast 106. Indexes the cast 107. Die pinning the cast 108. Die cutting the cast 109. Die ditching 110. Articulating the models	Metal sub-structure types properties and uses. Spruing investing finishing and polishing metal restorations. Die preparation and its relevance.
Professional Skill 150 Hrs.; Professional Knowledge 60 Hrs.	25. Fabricate porcelain fused to metal crown.	111. Oxidizes the crown. 112. Ceramic layering anterior crown. 113. Ceramic layering posterior maxillary. 114. Ceramic layering maxillary first molar. 115. Ceramic layering mandibular molar glazing. 116. CAD-CAM technology. 117. CAD/ software for dental cut – CADCAM	Ceramic as a material, shade selection, oxidation, opaque, layering dentin layers, enamel layering. Introduction to various ceramic systems ceramic systems, available in market, economic interpretation of the ceramic systems. Choosing right systems Advances in dental ceramics communicating with the dentist.

		technology. 118. Zirconia and knowledge of latest crown prosthesis.	
Project work / Hospital visit Broad Areas: a) Operates all equipment used in fixed prosthodontics. b) Handle all equipment according to manufacturer's instructions. c) Mock-up of anterior crowns for porcelain fused to metal and metal free crowns. d) Trimming, finishing and polishing of copings. e) Ceramic layering anterior crown. f) Articulating the models.			

SYLLABUS FOR CORE SKILLS
1. Employability Skills (Common for all CTS trades) (120 Hrs. for 1 st year + 60 Hrs. for 2 nd year)

Learning outcomes, assessment criteria, syllabus and Tool List of Employability Skills is provided separately in www.cstaricalcutta.gov.in / www.bharatskills.gov.in / www.dgt.gov.in

List of Tools & Equipment			
DENTAL LABORATORY EQUIPMENT TECHNICIAN (For batch of 24 candidates)			
S No.	Name of the Tools and Equipment	Specification	Quantity
TRAINEES TOOL KIT (For each additional unit trainees tool kit Sl. 1-9 is required additionally)			
1.	Works knife		24 Nos.
2.	Works spatula		24 Nos.
	Wax		24 nos.
3.	Plaster knife		24 Nos.
4.	Plaster spatula		24 Nos.
5.	Rubber bowl		24 Nos.
6.	Some trimming burs for Acrylic, Metal, & ceramic		24 Nos.
7.	Flask (Different Size)		As required
8.	PKT- Set		24 set
9.	Needle Holder		24 Nos.
SHOP TOOLS, INSTRUMENTS – For 2 (1+1) units no additional items are required			
Lists of Tools:			
A. For Denture Section			
10.	Hanging Motor		2 Nos.
11.	Micromotors		2 Nos.
12.	Hand piece		2 Nos.
13.	Polishing Machine		4 Nos.
14.	Cable Arm		2 Nos.
B. For Metal Section			
15.	Micro Motor Inc. Hand Piece		1 set
16.	Vacuum Mixer Cum Vibrator Mc.		1 No.
17.	Metal Finishing Cabinet		2 Nos.
C. For Wax -up Section			
18.	Electro Waxer M/c. with hand piece		1 set.
19.	Hand Wax carver		2 Nos.
20.	Exhaust Fan	heavy duty	As required
D. For Ceramic Section			
21.	Porcelain Furnace		1No.
22.	Micro Motor with Hand Piece		2 Nos.
23.	Ultra-Sonic Cleaner		1 No.
24.	Ceramic Systems		1 Box
25.	Air conditioner		As required

E. For casting Section			
26.	Induction casting Mc.		1 No.
27.	Sand Blasting Mc.		1 No.
28.	Muffle Furnace		1 No.
29.	Manual Casting Machine		1 No.
30.	Air compressor		1 No.
F. For Model Section			
31.	Trimmer		1 No.
32.	Finishing lathe		1 No.
G. COMMON FOR ALL THE SECTIONS			
33.	Tongs		1 No.
34.	Portable weighing machine		1 No.
35.	Hammer		1 No.
36.	Plier		1 No.
37.	Cutter		1 No.
38.	Die saw		1 No.
H. Audio Visual Aid			
39.	LCD Projector		1 No.
40.	Computer with the configuration:		1 No.
41.	Model of Oral Anatomy		2 Nos.
42.	Charts related to Dentistry		As required
List of Chemicals, store and Raw Materials (As required)			
A. For Denture Section			
43.	Sand Paper		1 No.
44.	Modeling Wax		1 No.
45.	RR Powder		1 No.
46.	RR Liquid		1 No.
47.	Articulator 3 Pin		1 No.
48.	Shellac Base Plate-Upper		1 No.
49.	Shellac Base Plate-Upper		1 No.
50.	Chip Blower		1 No.
51.	Teeth Set		1 No.
52.	Flask		1 No.
53.	Clamp		1 No.
54.	Container (Vessel)		1 No.
55.	Gas Cylinder		1 No.
56.	Denture Polishing Buff-Cotton		1 No.
57.	Denture Polishing Cake		1 No.
58.	Acrylic trimming Burs		1 No.
59.	Sand Paper		1 No.
60.	Stainless Steel Wire		1 No.

61.	Heat Cure Powder		1 No.
62.	Heat Cure Liquid		1 No.
63.	Cold Mould Seal		1 No.
64.	Mckintosh sheet		1 No.
65.	Pumice Powder		1 No.
66.	SC-10		1 No.
B. For Metal Section			
67.	Crucible		1 No.
68.	Alloy Nickel Chromium		1 No.
69.	Cutting disc small		1 No.
70.	Cutting disc large		1 No.
71.	Carbide Bur		1 No.
72.	Metal Gauze		1 No.
73.	Mask		1 No.
74.	Sand		1 No.
75.	Polishing Cake -Metal		1 No.
76.	Silicon wheel		1 No.
77.	Rubber Pont		1 No.
78.	Buff –Metal		1 No.
79.	Mandrel		1 No.
C. For Wax -up Section			
80.	Blue Inlay wax		1 No.
81.	Margin wax		1 No.
82.	Hard wax		1 No.
83.	Mock up wax		1 No.
84.	Spacer		1 No.
85.	Hardener		1 No.
86.	Brush		1 No.
87.	Sprue		1 No.
88.	Debubblizer		1 No.
89.	BP Blade		1 No.
90.	BP Handle		1 No.
91.	Ring Linear		1 No.
92.	Articulator		1 No.
93.	Articulating Paper		1 No.
D. For Ceramic Section			
94.	Opaque-Powder		1 No.
95.	Opaque Paste		1 No.
96.	Ceramic Brushes		1 No.
97.	Ceramic Blade		1 No.
98.	Dentin Powder		1 No.
99.	Enamel Powder		1 No.

100.	Modelling fluid		1 No.
101.	Glass slab		1 No.
102.	Mixing Spatula		1 No.
103.	Firing Tray		1 No.
104.	Round Bur		1 No.
105.	Glaze Powder-Liquid		1 No.
106.	Ceramic Stone		1 No.
107.	Stains-Yellow		1 No.
108.	Articulator		1 No.
109.	Articulating Paper		1 No.
110.	Tissue Roll		1 No.

E. For casting Section

111.	Investing Ring		1 No.
112.	Investment powder		1 No.
113.	Investment Liquid		1 No.
114.	Crucible		1 No.
115.	Ringless system		1 No.
116.	Alloy Nickel Chromium		1 No.

F. For Model Section

117.	Base Former		1 No.
118.	Dental Stone		1 No.
119.	Die Stone		1 No.
120.	Dental Plaster		1 No.
121.	Die Saw Blade		1 No.
122.	Die Pins		1 No.

Note: -

1. Internet facility is desired to be provided in the class room.

The DGT sincerely acknowledges contributions of the Industries, State Directorates, Trade Experts, Domain Experts and all others who contributed in revising the curriculum. Special acknowledgement is extended by DGT to the following expert members who had contributed immensely in this curriculum.

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ABBREVIATIONS	
CTS	Craftsmen Training Scheme
ATS	Apprenticeship Training Scheme
CITS	Craft Instructor Training Scheme
DGT	Directorate General of Training
MSDE	Ministry of Skill Development and Entrepreneurship
NTC	National Trade Certificate
NAC	National Apprenticeship Certificate
NCIC	National Craft Instructor Certificate
LD	Locomotor Disability
CP	Cerebral Palsy
MD	Multiple Disabilities
LV	Low Vision
HH	Hard of Hearing
ID	Intellectual Disabilities
LC	Leprosy Cured
SLD	Specific Learning Disabilities
DW	Dwarfism
MI	Mental Illness
AA	Acid Attack
PwD	Person with disabilities

