सूक्ष्म, लघु एवं मध्यम उद्यम मंत्रालय
DEVELOPMENT COMMISSIONER
MINISTRY OF MICRO, SMALL & MEDIUM ENTERPRISES

MSME TECHNOLOGY CENTRE

# QUALIFICATION FILE

## CNC PROGRAMMER -TOOL ROOM

**☒ Short Term Training (STT) ☐ Long Term Training (LTT) ☐ Apprenticeship**

**☐Up skilling☐ Dual/Flexi Qualification ☐ForToT☐ For ToA**

**☒General ☐ Multi-skill (MS) ☒ Cross Sectoral (CS) ☐ Future Skills ☐ OEM**

**NCrF/NSQF Level: 4.5**


**Submitted By:**

**MSME TECHNOLOGY CENTRE**

**O/o DC MSME, Ministry of Micro, Small and Medium Enterprises**

**Govt. of India**

**A-Wing, 7th Floor, Nirman Bhawan, Maulana Azad road**

**New Delhi-110108**

**Contact No. +91-674-2654700**

**Email-msmetcab@gmail.com**


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## Table of Contents



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# Section 1: Basic Details

| | | | |
|---|---|---|---|
| **1.** | **Qualification Name** | **CNC PROGRAMMER-TOOL ROOM** | |
| **2.** | **Sector/s** | **Capital Goods & Manufacturing** | |
| **3.** | **Type of Qualification: ☒ New ☐ Revised ☐ Has Electives/Options**<br>**☐OEM** | **NQR Code & version of existing/previous qualification:** *(change to previous, once approved)*<br>**QG-4.5-CG-02403-2024-V1-MSME** | **Qualification Name of existing/previous version:** |
| **4.** | **a. OEM Name**<br>**b. Qualification Name**<br>(*Wherever applicable)* | **NA**<br>- | |
| **5.** | **National Qualification Register (NQR) Code&Version**<br>(*Will be issued after NSQC approval)* | QG-4.5-CG-02403-2024-V1-MSME | **6. NCrF/NSQFLevel: 4.5** |
| **7.** | **Award (Certificate/Diploma/Advance Diploma/Any Other***(Wherever applicable specify multiple entry/exits also & provide details in annexure)* | **Certificate** | |
| **8.** | **Brief Description of the Qualification** | This is an Advance Diploma programme in which students tend to get excellent career opportunities in the field of CNC and To upgrade professional skills of the learner to deal with technological change.<br>• Learners who attain this qualification are competent in CNC programming for manufacturing sector.<br>• Qualified learners are competent to get an employment in Engineering/ Manufacturing industries as per the requirement of MSMEs<br>• Qualified learners will become an entrepreneur | |

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**9. Eligibility Criteria for Entry for Student/Trainee/Learner/Employee**

a. Entry Qualification &Relevant Experience: Qualification & Relevant Experience in the field of Mechanical Engineering& its Equivalent

| S. No. | Academic/Skill Qualification (with Specialization - if applicable) | Required Experience (with Specialization - if applicable) |
|---|---|---|
| 1 | Completed 3-year diploma after 10th, Pursuing 3rd year of 3-year diploma after10th and continuing education | - |
| 2 | Previous relevant Qualification of NSQF Level 4 in the field of CNC | 1.5 year relevant experience |
| 3 | Previous relevant Qualification of NSQF Level 3.5 in the field of CNC | 3 year relevant experience |
| 4 | 2 year ITI in relevant Trade* | 1 year relevant experience |

.b. Age: 17 Years

**10. Credits Assigned to this Qualification, Subject to Assessment** *(as per National Credit Framework (NCrF))*

**20**

**11. Common Cost Norm Category (I/II/III)** *(wherever applicable)*:**I**

**12. Any Licensing requirements for Undertaking Training on This Qualification** *(wherever applicable)*

NA

**13. Training Duration by Modes of Training Delivery** *(Specify **Total Duration** as per selected training delivery modes and as per requirement of the qualification)*

☐**Offline** ☐**Online** ☒**Blended**

| Training Delivery Modes | Theory (Hours) | Practical (Hours) | OJT Mandatory (Hours) | OJT Recommended (Hours) | Total (Hours) |
|---|---|---|---|---|---|
| **Classroom (offline)** | **72** | **360** | **60** | **-** | **492** |
| **Online** | **108** | - | - | - | 108 |
| **Total** | **180** | 360 | 60 | | 600 |

*(Refer Blended Learning Annexure for details)*

**14. Aligned to NCO/ISCO Code/s** *(if no code is available mention the same)*

***7223.60 (CNC Programmer)***

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| | | | |
|---|---|---|---|
| **15.** | **Progression path after attaining the qualification** *(Please show Professional and Academic progression)* | ***Professional / Career Progress:*** Supervisor<br><br>**Academic *Progress:*** CNC Programmer-Tool Room (NSQF Level 4.5)→ Engineer-Tool Room ( NSQF Level 5.5) | |
| **16.** | **Other Indian languages in which the Qualification & Model Curriculum are being submitted** | **Hindi** | |
| **17.** | **Is similar Qualification(s) available on NQR-if yes, justification for this qualification** | **☐Yes ☒No URLs of similar Qualifications** | |
| **18.** | **Is the Job Role Amenable to Persons with Disability** | **☒Yes ☐ No**<br>**If "Yes", specify applicable type of Disability: As Per Government Norms** | |
| **19.** | **How Participation of Women will be Encouraged** | **Seats are reserved as per government Norms.** | |
| **20.** | **Are Greening/ Environment Sustainability Aspects Covered** *(Specify the NOS/Module which covers it)* | **☒Yes ☐No**<br>**The said aspect is covered in the module name Employability skills** | |
| **21.** | **Is Qualification Suitable to be Offered in Schools/Colleges** | **Schools☐ Yes ☒ No Colleges ☒ Yes ☐ No**<br>**Subject to availability of resources.** | |
| **22.** | **Name and Contact Details of Submitting / Awarding Body SPOC**<br>*(In case of CS or MS, provide details of both Lead AB & Supporting ABs)* | **Name: Sh. Vijay Mahipatrao Bankar**<br>**Contact No. +0755 3501078**<br>**Email-msmetcab@gmail.com** | |
| **23.** | **Final Approval Date by NSQC:30.04.2024** | **24. Validity Duration:3years** | **25. Next Review Date:30.04.2027** |

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# Section 2: Module Summary

## NOS/s of Qualifications

(*In exceptional cases these could be described as components)*

### Mandatory NOS/s:

Specify the training duration and assessment criteria at NOS/ Module level, for further details refer curriculum document.

***Th.**-Theory **Pr.**-Practical **OJT**-On the Job **Man.**-Mandatory Training Rec**.**-Recommended Proj**.**-Project*

| S. No | NOS/Module Name | NOS/ Module Code & Version *(if applicable)* | Core/ Non-Core | NCrF/NSQF Level | Credits as per NCrF | Training Duration (Hours) | | | | | Assessment Marks | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Th. | Pr. | OJT-Man. | OJT-Rec. | Total | Th. | Pr. | Proj. | Viva | Total | Weightage (%) *(if applicable)* |
| 1 | Understand the Concept of Production Process | MSME/ADCNC/01 & Version 1.0 | Core | 4.5 | 2 | 60 | - | | - | 60 | 100 | - | - | - | 100 | |
| 2 | Read, Interpret and Create Part Drawing using Auto-CAD | MSME/ADCNC/02 & Version 1.0 | Core | 4.5 | 3 | 30 | 60 | - | - | 90 | - | 100 | - | - | 100 | |
| 3 | Create, Generate and Execute CNC Program for Manufacturing Process | MSME/ADCNC/03 & Version 1.0 | Core | 4.5 | 12 | 30 | 270 | 60 | - | 360 | - | 100 | - | 100 | 200 | |
| 4 | Check and Inspect dimensions of machined Part using various Measuring instrument | MSME/ADCNC/04 & Version 1.0 | Core | 4.5 | 1 | - | 30 | - | - | 30 | - | 100 | - | - | 100 | |
| 5 | Employability skills | MSME/ES/02 | None Core | 4.5 | 2 | 60 | - | - | - | 60 | 100 | - | - | - | 100 | |
| **Duration (in Hours) / Total Credit / Marks** | | | | | **20** | **180** | **360** | **60** | **-** | **600** | **200** | **300** | **-** | **100** | **600** | |

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## Elective NOS/s:

| S. No | NOS/Module Name | NOS/ Module Code & Version *(if applicable)* | Core/ Non-Core | NCrF/NSQF Level | Credits as per NCrF | Training Duration (Hours) | | | | | Assessment Marks | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Th. | Pr. | OJT-Man. | OJT-Rec. | Total | Th. | Pr. | Proj. | Viva | Total | Weightage (%) *(if applicable)* |
| | | | | | | | | | | | | | | | | |

## Optional NOS/s:

| S. No | NOS/Module Name | NOS/ Module Code & Version *(if applicable)* | Core/ Non-Core | NCrF/NSQF Level | Credits as per NCrF | Training Duration (Hours) | | | | | Assessment Marks | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Th. | Pr. | OJT-Man. | OJT-Rec. | Total | Th. | Pr. | Proj. | Viva | Total | Weightage (%) *(if applicable)* |
| | | | | | | | | | | | | | | | | |

## Assessment - Minimum Qualifying Percentage:

*Please specifyany one of the following:*

**Minimum Pass Percentage –Aggregate at qualification level:** *(Every Trainee should score specified minimum aggregate passing percentage at qualification level to successfully clear the assessment.)*

*Minimum Marks to pass Theory Exam: 40%*
*Minimum Marks to pass Practical Exam: 60%*

**Minimum Pass Percentage –NOS/Module-wise :***( Every Trainee should score specified minimum passing percentage in each mandatory and selected elective NOS/Module to successfully clear the assessment.)*

*Minimum Marks to pass Theory Exam: 40%*
*Minimum Marks to pass Practical Exam: 60%*

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# Section 3: Training Related

| | | |
|---|---|---|
| 1. | **Trainer's Qualification and experience in the relevant sector (in years)***(as per NCVET guidelines)* | Diploma/ Degree in Mechanical Engineering or Equivalent with Practical skills and knowledge required in the relevant job roleat least one level higheri.e level 5 and above in related fieldand minimum 2 years of experience in Tool Room/ Technology Centre of MSME or any reputed industry will become a trainer, or in accordance with the TOT guideline of NCVET |
| 2. | **Master Trainer's Qualification and experience in the relevant sector (in years)** *(as per NCVET guidelines)* | Degree in Engineering (Mechanical/ Production/Manufacturing Technology) or equivalent with 3 to 5 years of experience in Production/ Training/ Design Department from Tool Room/ Technology Centre of MSME or any reputed industry will become as a Master Trainer, Or in accordance with the TOT guideline of NCVET |
| 3. | **Tools and Equipment Required for Training** | ☒Yes ☐No (*If "Yes", details to be provided in Annexure)* |
| 4. | **In Case of Revised Qualification, Details of Any Upskilling Required for Trainer** | Yes |

# Section 4: Assessment Related

| | | |
|---|---|---|
| 1. | **Assessor's Qualification and experience in relevant sector (in years)** *(as per NCVET guidelines)* | Diploma / Degree in Engineering (Mechanical/ Production/ Manufacturing Technology) or equivalent with 3 years of experience in Production/ Training/ Design Department from Tool Room/ Technology Centre of MSME or any reputed industry.Only(TOA) certified assessors will be able to conduct the assessments. |
| 2. | **Proctor's Qualification and experience in relevant sector (in years)** *(as per NCVET guidelines)* | Degree in Engineering (Mechanical/ Production/ Manufacturing Technology) or equivalent With 5 years of experience in Production/ Training/ Design Department from Tool Room/ Technology Centre of MSME or any reputed industry. |
| 3. | **Lead Assessor's/Proctor's Qualification and experience in relevant sector (in years)** *(as per NCVET guidelines)* | Post Graduate in the relevant discipline with minimum 5 years of experience in Production/ Training/ Design Department from Tool Room/ Technology Centre of MSME or any reputed industry. |
| 4. | **Assessment Mode***(Specify the assessment mode)* | **Blended Type (Online + Offline)** |
| 5. | **Tools and Equipment Required for Assessment** | ☒ Same as for training ☒ Yes ☐ No *(details to be provided in Annexure-if it is different for Assessment)* |

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# Section 5: Evidence of theneed for the Qualification

*Provide Annexure/Supporting documents name*.

| | |
|---|---|
| 1. | **Latest Skill Gap Study (not older than 2 years)(Yes/No): Yes,** India Skills Report 2023, " Roadmap to India's Skills and talent Economy 2030" |
| 2. | **Latest Market Research Reports or any other source (not older than 2years) (Yes/No):**<br><br>**Yes,** "Engineering and capital goods industry" (Feb-2023) by India Brand Equity Foundation –IBEF (Trust established by the Department of Commerce, Ministry of Commerce and Industry, Government of India |
| 3. | **Government /Industry initiatives/ requirement (Yes/No):**Yes |
| 4. | **Number of Industry validation provided:49** |
| 5. | **Estimated nos. of persons to be trained and employed:1000 approx** |
| 6. | **Evidence of Concurrence/Consultation with Line Ministry/State Departments:** *Yes*<br><br>If "No", why: |

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# Section 6: Annexure & Supporting Documents Check List

*Specify Annexure Name / Supporting document file name*

| | | |
|---|---|---|
| 1. | **Annexure:** NCrF/NSQF level justification based on NCrF level/NSQF descriptors *(Mandatory)* | *Annexure-I* |
| 2. | **Annexure:** List of tools and equipment relevant for qualification *(Mandatory, except in case of online course)* | *Annexure-II* |
| 3. | **Annexure:**Industry Validation Summary | *Annexure-III* |
| 4. | **Annexure:** Training & Employment Related | *Annexure IV* |
| 5. | **Annexure:** Blended Learning *(Mandatory, in case selected Mode of delivery is "Blended Learning")* | *Annexure V* |
| 6. | **Annexure:** Detailed Assessment Criteria *(Mandatory)* | *Annexure-VI* |
| 7. | **Annexure:** Assessment Strategy *(Mandatory)* | *Annexure-VII* |
| 8. | **Annexure:** Multiple Entry-Exit Details *(Mandatory, in case qualification has multiple Entry-Exit)* | *NA* |
| 9. | **Annexure:** Acronym and Glossary *(Optional)* | *Annexure VIII* |
| 10. | **Supporting Document:** Model Curriculum *(Mandatory – Public view)* | *Annexure IX* |
| 11. | **Supporting Document:** Career Progression *(Mandatory - Public view)* | *This aspect is mention in point no 15.* |
| 12. | **Supporting Document:** Occupational Map *(Mandatory)* | *Annexure-X* |
| 13. | **Supporting Documents:** Assessment SOP(Mandatory) | *Annexure XI* |
| 14. | **Any other document you wish to submit:** | *NA* |

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# Annexure:1 Evidence of Level

| NCrF/NSQF Level Descriptors | Key requirements of the job role/ outcome of the qualification | How the job role/ outcomes relate to the NCrF/NSQF level descriptor | NCrF/NSQF Level |
|---|---|---|---|
| **Professional Theoretical Knowledge/Process** | • Concept of manufacturing process specifically programming and machining of mechanical components such as Press tools, Dies, Moulds, Jigs, Fixtures, Automobile & Aerospace components etc. | • The Job holder must know the correct procedures to addressproblems commonly encountered during generating and transferring the program for the specified controllers and able to detect and solve the problem in a timely manner<br>• Interpret in-built machine alarms/sounds and respond to the same as per selection of proper cutting speed, feed and depth of cut which depends on the type of material, process and cutting tool to generate the program for manufacturing the job.<br>• Identify the material which will be used for manufacturing product | 4.5 |
| **Professional and Technical Skills/ Expertise/ Professional Knowledge** | • Acquire skills of CNC & CAM Programming as per engineering standards & prepare the part as well as assembly drawing of the mechanical components with the help of CAD software's within the drawing standards.<br>• Acquire skills of measurements techniques. | • The job role after attaining this qualification "ADCNC" is to develop models and generate the program for manufacturing the varieties of desired jobs/components within tolerance provided as per the drawing in CNC Turning, and CNC Milling in a well familiar environment. The role also involves study and understands the drawing and selects optimum manufacturing technique by himself and modify/edit the programme as per requirement<br>• Edit the program whenever required and execute the same for manufacturing.<br>• Transfer the program to the machine through DNC for optimum utilization of resources.<br>• .Identify and select the proper machines, cutting tools and measuring instruments to carry out the job.<br>• Read the drawing and conceive the idea to generate program and recognize the fault on the machine during operation. | 4.5 |
| **Employment Readiness & Entrepreneurship Skills & Mind-set/Professional Skill** | Wide range of cognitive and practical skills required to generate solutions to specific problems in a field of work or study | • Learner can develop communication competence, report writing skills & preparation of Resumes or Curriculum Vitae, Learner can be able to interact effectively with co-workers and can apply the Engineering Ethics and Human Values at workplace.<br>• Leaner can understand the basic process of becoming an entrepreneur &start up and can get benefits from various government schemes applicable. | 4.5 |

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| | | | |
|---|---|---|---|
| **Broad Learning Outcomes/Core Skill** | • Acquire skills to calculate the machining parameters like cutting speed, feed and depth ofcut etc.<br>• Edit /Modify the program as per the requirement of work in order to maintain the target output<br>• Aware about the social as well as environmentalsituations during working. | • Lerner will have wide range of numerical and computational abilities for different machining process<br>• Lerner will have the broad knowledge of communications, health & safety norms.<br>• Learner Should be able to listen and understand the complex information in a clear and concise manner<br>• Learner will also have the ability to read & interpret engineering drawing and documentation requirement as per organizational norms<br>• Learners will have the knowledge of evaluating the components with the standards drawing for the given job.<br>• Use of GD&T symbols, apply laws ofprecedence in the use of precedence (BODMAS), use appropriate measuring techniques and units of measurement, etc.<br>• Learners are capable of taking decision for the quality output and productivity enhancement | 4.5 |
| **Responsibility** | Learner ishighly skilled in CNC / CAM Programming and responsible for achieving tangible outcomes, managing change, building teams, and mentoring the Co-workers and subordinates.<br><br>. | • Learners are expected to perform the work as technical Supervisor and Manages processes and procedures within broad parameters for defined activities.<br>• Supervises the routine work of co-worker and subordinates, takes the required responsibility for the evaluation and improvement of work and Constantly motivates, guides, mentors to their subordinates /Team members<br>• Taking responsibility of proper execution of the program generated and its actions for the operation, quality and accuracy of the work. | 4.5 |

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# Annexure II: Tools and Equipment (Lab Set-Up)

**List of Tools and Equipmentfor Batch Size:20**

| S. No. | Tools / Equipment Name | Specification | Quantity for specified Batch size |
|---|---|---|---|
| 1 | Conventional Turning / Lathe Machine | | 2 |
| 2 | CNC Turning Machine with attachments | | 4 |
| 3 | Conventional Milling | | 2 |
| 4 | CNC Milling Machine with attachments | | 4 |
| 3 | Tool & Cutter Grinders | | 1 |
| 4 | Conventional Drilling machine | | 1 |
| 5 | Grinding Machine | | 1 |
| 6 | Pedestal grinding machine | | 1 |
| 7 | CNC Simulator | | 20 seats |
| 8 | Desk top / Computer system With LAN | | 20 seats |
| 9 | CAD -Auto CAD Software | | 20 seats |
| 10 | CAM Software | | 20 seats |
| 11 | **Measuring Instruments:**<br>Vernier Caliper, Micrometer: External & Internal, Height Gauge, Dial Indicators (Lever type & Plunger type), Profile Projector, Different types of Gauges (Slip, Bore, Ring, Plug, Radius, Feeler, Thread pitch etc.), Engineering steel rules, Outside & Inside spring callipers, Try square, Precision block levels, Surface roughness tester. | | 1 Set |
| 12 | **Cutting tools:**<br>**Turning:** Single Point brazed turning tool, Boring bars, Twist Drills: Parallel & taper shank types (MT-1 / MT-2/ MT-3/MT-4), Knurling and threading tools.<br>**Milling:** End mill, Face mill, Ball nose cutter, Slab mill. | | 1 Set |

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| | | | |
|---|---|---|---|
| 13 | **Cutting Inserts:**<br>CNMG, VNMG, DNMG, WNMG, CCMT and TCMT | | 1 Set |
| 14 | **Tool Holders:** Turning tool holders for OD/ID turning, Profile turning, Grooving/Parting, Drilling, Boring, Threading, Sleeves, Set of Spring collets (ER-16, ER-25,ER-32, ER-40) and Collet adopters. BT-40 for milling | | 1 set |
| 15 | **Hand Tools:** Centre punches, Hammers, Combination Plier, set of number punches, set of double ended spanners, set of box spanners with ratchet handle, Adjustable spanner, set of screw drivers, Nylon / Soft hammer, set of hexagonal Allen keys, cutting files: flat, round, half round, square and triangular | | 1 set |
| 16 | **Others Miscellaneous items for workshop / Lab :**Industry hand gloves, Apron, Safety goggles, Bench vice, Magnetic stand for dial indicators, Spring dividers, Angle Plates, Scribing blocks, Vice mounted tables, Scrap box, Tool storage trolley, Set of soft jaws, Power Saw, Surface plate, Oil stone , Hand pallet truck and First aid kit. | | 1 set |
| 17 | **General Equipment for Classroom**: White Board, Smart Board, Duster, Marker, Multimedia /LCDProjector, Audio Video Aids,Pen drive and Practice exercise etc,. | | 1 set |

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# Annexure III: Industry Validations Summary

*Provide the summary information of all the industry validations in table. This is not required for OEM qualifications.*

| S. No | Organization Name | Representative Name | Designation | Contact Address | Contact Phone No | E-mail ID | LinkedIn Profile *(if available)* |
|---|---|---|---|---|---|---|---|
| 1 | NEHA ENTERPRISES | KHALID MEHMOOD | OWNER | | 9300800007 | KHALIDMEHMOOD00007@GMAIL.COM | |
| 2 | AXOM Farm Machinery Pvt. Ldt. | wakshar Chakravarty | Managing Director | 60, MRD Road, Guwahati, Asam - PNI 781020 | 70860 99788 | swakshar@hotmail.com | |
| 3 | ADD CONSTRUCTION | DURKUV HATB | PARTNER | College Nagar, Abhoypur, North Guwahati Guwahati-781031 (Assam) | 9435119042 | addconstruction38@gmail.com | |
| 4 | Hue Service Private Limited | ANUP KUMAR MUAL | MANAGER OPERATIONS | "38A, Broad Street, Ground floor, | 9508576861 | GUWAHTI@HUESERVICES.COM | |
| 5 | ORBIT INFOSOLUTION | SACHINDUA NATH | PARTNER | Beside Mahadevi Birla Kalyan Mandapam, Ballygunge, Kolkata - 700 019." | 9830429275 | CORPORATE@ORBITINFO.IN | |
| 6 | The Supreme Industries Limited. | Mr. SiromaniRajkhowa | PLANT HEAD | FERN ROAD, KOLKATTA-7000019 | +91 7578-012031 | siromani_rajkhowa@supreme.co.in | |
| 7 | JAY AMBAY POLYMERS | NAGEUDU LIALODIS | PROPRIETER | E. P. I. P. Complex, Amingaon. | | | |

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| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 8 | CAMA ELECTRICALS PRIVATE LIMITED | Nishad Azmi Bokth | H.R Manager | ROAD FANCY,GUWAHATI-781001 | 7099065843 | HR@HMCASSAM.IN | |
| 9 | ASACO PRIVATE LIMITED | N. ELMURTI | MANAGER OPERATIONS | "2nd Floor, E1 and E2 Block, Brahmaputra Industrial Park, Plot No 21, | 7799 787 747 | asacoltd@asaco.in | |
| 10 | RUDRA MAGNETS LLP | M. P. Shalda | MANAGER | Changsari, Sila, Amingaon, North Guwahati, Kamrup, Assam," | 98858 77000 | contactus@rudramagnets.com | |
| 11 | T3D Labs Pvt. Ltd. | Kalesha Shaik | Operation Manager | SamuhaAerospaceParkAdibatlaIbrahimpatnamRangareddyDistrictTamelgana state | | kalesha@think3d.in | |
| 12 | EAST COAST MAGNETS PVT. LTD. | NIRMALA | MANAGER | 625, Badam Road, Satyavedu Mandal, Sricity - 517 646, Andhra Pradesh, | 8048989786 | DIRECTOR.eastcoastmagnet.com | |
| 13 | Azad Engineering Limited, | K.SathiraJU | GENERAL MANAGER | 480/P, Addit Building, AP MedTech Zone, 530031 | 78931 77300 | sathiraju.k@azad.in | |
| 14 | TULSHI ENERGY ENTERPRISES | MAHENDRA SINGH | OWNER | 44/1/6; Phases; 1DA:, JeedIMETIA,HYDRABAD- | 9893181571 | https://www.tulsienergyservices.com/ | |

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|---|---|---|---|---|---|---|---|
| | | | | 500055 | | | |
| 15 | ALLWIN UNITED ASSOCIATION PVT.LTD | MI PANKAJ | DIRECTOR | ALLWIN UNITED ASSOCIATION PVT.LIMITED | 7588537412 | CONTACT@TECHNOCADDAPL.COM | |
| 16 | MIS ANNA BLOCK BORING CENTER | MASIT KHAN | PROPRIETOR | MIS ANNA BLOCK BORING CENTER | 9767375083 | | |
| 17 | LAXMI ENTERPRISES | RANJANA BHAYYA SAHEB PAWAR | MI.MANAGER | SAINAGAR GHANEGAON MIDC WALUJ, AURANGABAD | 7387431128 | | |
| 18 | M/S HR INDUSTRIES | VASPUT JAUGELE | PROPRIETOR | SAJAPUR, AURANGABAD | 9637384737 | | |
| 19 | GAYATRJ AUTO COMPONENTS, AURANGABAD | MR. RANJEET METE | MANAGER | AURANGABAD | 7385613842 | INFO@GAYATRIAUTO.IN | |
| 20 | SHARP TOOLS | MAHESH DORLE | SR.MANAGER | | 9689574563 | | |
| 21 | CHANCHAL ENGINEERING WORKS AURANGABAD | DRYHAEBHWAR | PROPRIETOR | AURANGABAD | 9765499939 | CHANCHALENGINEERINGWORKS@GMAIL.COM | |
| 22 | AKSHARA ENGINEERING WORKS | SHIVAJI GAIKWAD | | WALUJ MIDC AURANGABAD | 9096420857 | | |

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| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 23 | ARUSHI ENGINEERING AND BREEZING | VIJAYA PARADE | MANAGER | WALUJ MIDC AURANGABAD | 9049596736 | | |
| 24 | SR INDUSTRIES AURANGABAD | RAJENDRA SAUDAGAR MARE | SR. MANAGER | AURANGABAD | 8698145607 | | |
| 25 | DEVA ENGINEERING AURANGABAD | ASHOK MOTINAM VEOR | SR. MANAGER | AURANGABAD | 8459567793 | | |
| 26 | MAULI PATTERN AURANGABAD | MR.PANCHAL | PROFESSOR | AURANGABAD | 9673067755 | | |
| 27 | NAVARATNA INDUSTRIES | | | WALUJ MIDC AURANGABAD | | | |
| 28 | PRANAW ENTERPRISES AURANGABAD | PANDRINATH DEVKAR | PROPRIETOR | AURANGABAD | 9371671146 | PRANAVENT@GMAIL.COM | |
| 29 | R.P INDUSTRIES | PRASHANT PATIL | CEO | MIDC CHIKATHANA AURANGABAD | 8007222251 | PRASHANTPATIL@GMAIL.COM | |
| 30 | TECHNO MOULD SOLUTION | MR.PANDA | PROPRIETOR | AURANGABAD | 7774077907 | TECHNOMOULD.SOLUTIONS@GMAIL.COM | |
| 31 | SANJAY THCHNO PRODUCTS | HEMANT CHAUDHURY | VP-MANUFACTURING | AURANGABAD | 9158898090 | HEMANT.CHAUDHARI@SANJAYTECHNOPRODUCTS.IN | |

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| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 32 | SPECIAL PRECISION | ASHIWINI TADHAV | PROPRIETOR | AURANGABAD | | SPECIALASHIWIN@GMAIL.COM | |
| 33 | PARASON MACHINERY (INDIA) PVT LTD | GHAHU | GM | AURANGABAD | 9325202860 | AMOIL.MOGAL@PASASEN.COM | |
| 34 | PADMA INDUSTRIES | VITTHALKADOM | CEO | MIDC AURANGABAD | 9421688212 | VITTHALKADOM2525@GMAIL.COM | |
| 35 | VANI ENGINEERING CO.PVT LTD | SUBH | GENERAL MANAGER | AURANGABAD | 9730729991 | SKAPE@GMAIL.COM | |
| 36 | GLANCE ENGINEERING -6 PVT.LIMITED CHIKALTHANA | SUBH SK | GENERAL MANAGER | CHIKALTHANA | 9730729991 | S.KALE@GMAIL.COM | |
| 37 | SURAJ TOOLS AND ENGINEERING WORKS | SURAJ | CEO | | 7447375273 | SURAJTOOLS@GMAIL.COM | |
| 38 | JAI BHAVANI ENGINEERING WORKS | | GENERAL MANAGER | | 9370251815 | | |
| 39 | RN INDUSTRIES | | CEO | MIDC KALAGRAM AURANGABAD | 9890718928 | R.N.INDUSTRIES01@GMAIL.COM | |

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|---|---|---|---|---|---|---|---|
| 40 | MADURA DIE CAST PVT LIMITD | MADHURA | CEO | SHENDRA AURANGABAD | 9422204622 | MADHRADIECAST@GMAIL.COM | |
| 41 | SWAGATI ENGINEERING WIS2 | | CEO | CHIKALTHNA,AURANGABAD | 9763714369 | SWAGATIENGG@GMAIL.COM | |
| 42 | S N ENGINEERINGWORKS | SNEHA | CEO | CH SAMBHAJINAGAR | 9822859974 | SNEHAG858@GMAIL.COM | |
| 43 | IDEAL ENTERPRISE | | GENERAL MANAGER | CHIKALTHANA AURANGABAD | 9763785199 | IDEAL1993@GMAIL.COM | |
| 44 | INDEXABLE CUTTING TOOL | TOR | PROPRIETOR | BAJAJNAGAR,AURANGABAD | | | |
| 45 | INDOTURAN INDUSTRIES | USHAL SHINDE | PROPRIETOR | MIDC AURANGABAD WALUJ | 9595280808 | | |
| 46 | CREATIVE CASTING INDUSTRIES | MR. SANJAY RANDIRE | PARTNER | K-30, MIDC WALUJ , AURANGABAD | 9011001671 | CREATIVECAST@REDIFFMAIL.COM | |
| 47 | PYRAMID INDUSTRIES | MR. RAJENDRA KALE | PROPRIETOR | | | | |
| 48 | RMG INDUSTRIES | RAOUAL | CEO | MIDC AURANGABAD WALUJ | 9766699611 | EAJUQANDA@RMGINDUSTRIES.COM | |

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|---|---|---|---|---|---|---|---|
| 49 | MIKRONIX GAUGES | MI PANKAJ | MD | B-25 MIDC , CHIKALTHANA, CH. SAMBHAJINAGAR | 9822004674 | MGPLAY@GMAIL.COM | |

Annexure IV: Training & Employment Details

Training and Employment Projections:

| Year | Total Candidates | | Women | | People with Disability | |
|---|---|---|---|---|---|---|
| | Estimated Training | Estimated Employment Opportunities | Estimated Training | Estimated Employment Opportunities | Estimated Training | Estimated Employment Opportunities |
| 24-25 | 1000 | 800 | 100 | 80 | - | - |
| 25-26 | 1500 | 1200 | 150 | 120 | - | - |
| 26-27 | 2000 | 1600 | 200 | 160 | - | - |

*Data to be provided year-wise for next 3 years*

**Training, Assessment, Certification, and Placement Data for previous versions of qualifications:**

| Qualification Version | Year | Total Candidates | | | | Women | | | | People with Disability | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Trained | Assessed | Certified | Placed | Trained | Assessed | Certified | Placed | Trained | Assessed | Certified | Placed |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1.0 | 20-21 | 47 | 47 | 47 | 45 | 7 | 7 | 7 | 5 | - | - | - | - |
| 1.0 | 21-22 | 144 | 144 | 144 | 130 | 12 | 12 | 12 | 9 | - | - | - | - |
| 1.0 | 22-23 | 242 | 242 | 242 | 220 | 22 | 22 | 22 | 18 | - | - | - | - |

*Applicable for revised qualifications only, data to be provided year-wise for past 3 years.*

**List Schemes in which the previous version of Qualification was implemented:**

1. Fee based Training Program under the Ministry of MSME.
2. ESDP Scheme under the Ministry of MSME.
3. PM DakshtaAurKushaltaSampannHitgrahiYojana under M/o SJE, GOI
4. Capacity building Training program under National SC/ST Hub, M/o MSME, GOI
5. DDUGKY under the MoRD.
6. Schemes under the different state Government.

**Content availability for previous versions of qualifications:**

☒ Participant Handbook ☒ Facilitator Guide ☒ Digital Content ☒ Qualification Handbook ☐ Any Other:

**Languages in which Content are available:**

English

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## Annexure V: Blended Learning

**Blended Learning Estimated Ratio &Recommended Tools:**

***Refer NCVET "Guidelines for Blended Learning for Vocational Education, Training & Skilling" available on:****https://ncvet.gov.in/wp-content/uploads/2023/01/Guidelines-for-Blended-Learning-for-Vocational-Education-Training-Skilling.pdf*

| S. No. | Select the Components of the Qualification | List Recommended Tools – for all Selected Components | Offline : Online Ratio |
|---|---|---|---|
| | | | |

| | | | |
|---|---|---|---|
| 1 | ☐Theory/ Lectures - Imparting theoretical and conceptual knowledge | Books/ e-books, Presentations, Reference Material , Audio / Video Modules with 2D and 3D animation Self-Learning Videos /Broadcasts /Mobile Learning /Curated Digital content | 40:60 |
| 2 | ☐Imparting Soft Skills, Life Skills, and Employability Skills /Mentorship to Learners | Self-Learning Videos , Broadcasts, Mobile Learning , Curated Digital content | 40:60 |
| 3 | ☐Showing Practical Demonstrations to the learners | CNC Simulators/ CAD Software, Video Content , E-Resource library | 100:0 |
| 4 | ☐Imparting Practical Hands-on Skills/ Lab Work/ workshop/ shop floor training | CNC Simulators, CNC Lathe& Milling Machines, Grinding Machines, Measuring, instruments, Cutting Tools, Hand Tools / CAD Software | 100:0 |
| 5 | ☐Tutorials/ Assignments/ Practice | Online Question Bank, Mobile Quick test app, MCQ based tests, Practical Test on Machines | 40:60 |
| 6 | ☐Proctored Monitoring/ Assessment/ Evaluation/ Examinations | Assessment engine for Essays, Up-loadable file examinations, Mock test sessions | 50:50 |
| 7 | ☐On the Job Training (OJT) | Live Project on CNC Machines, Measuring Instruments at concern Industry/ Institution | 100:0 |

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## Annexure VI: Detailed Assessment Criteria

Detailed assessment criteria for each NOS/Module are as follows:

| NOS/Module Name | Assessment Criteria forPerformance Criteria/Learning Outcomes | Theory Marks | Practical Marks | Project Marks | Viva Marks |
|---|---|---|---|---|---|
| **NOS / Module:** | PC.1 Describe safety rules<br>PC.2 Describe precautions to be taken for safety at work.<br>PC.3 Explain the safety precautions required in the given set of work. | 100 | - | - | - |

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|---|---|---|---|---|---|
| **MSME/ADCNC/01**<br><br>**Understand the Concept of Production Process** | PC.4 Explain the use of PPE while working in the workshop.<br>PC.5 Describe the characteristics of the cutting tool materials.<br>PC.6 Describe different types of materials used for cutting tools.<br>PC.7 Identify tool materials and their properties.<br>PC.8 Select tool material for the specific cutting tool application.<br>PC.9Explain &List different types of lathe machine w.r.t. its specifications.<br>PC.10 Identify majorparts and mechanism used in lathe<br>PC.11 Explain the various lathe operation<br>PC.12Explain the parts and its function of milling machine.<br>PC.13Explain the parts and its function of grinding machine.<br>PC.14. Explain engginering material with its type<br>PC.15.Descrive the various property of material such as Mechanical, Electrical, magnetic, Chemical, Optical, Physical.<br>PC.16Describe mechanical property of material such as 1. Strength, 2.Elasticity, 3.Plasticity, 4.Stiffness, 5.Resilience, 6.Toughness, 7.Ductility, 8.Malleability, 9.Hardness. 10.Brittleness, 11.Creep and 12,Fatigue<br>PC.17. Explain the Engineering application of Tool material<br>PC.18Describe Metals: ferrous &nonferrous.<br>PC.19Explain Ferrous materials: Contain Iron as base.<br>PC.20 Describe Ferrous Metals & their alloys extensively used in Metallurgical and mechanical Industries for shaping the products.<br>PC.21Nonferrous materials: Aluminum , Copper, Lead, Zinc, Tin , Nickel, Magnesium<br>PC.22Write the factors consider in selection of material.<br>PC.23Compare ferrous material with non-ferrous material.<br>PC.24Identify the type of material (ferrous or non-ferrous)<br>PC.25Describe the use of iron: Pig Iron , wrought iron , cast iron<br>PC.26 Describe the use of Steel: low carbon, high carbon, medium carbon, Alloy Steel.<br>PC.27Describe the steel making process & iron carbon diagram.<br>PC.28Describe the purpose of heat treatment of steel<br>PC.29 Explain the different heat treatment process such as Annealing, Stress relieving, Refining, Normalizing, Tempering and Hardening | | | | |
| **NOS / Module:**<br><br>**MSME/ADCNC/02**<br><br>Read, Interpret and Create Part Drawing using Auto-CAD | PC.1Describe co-ordinate system used in CAD/CAM & Describe the CAD/CAM software.<br>PC.2 Use auto-cad to draw geometry by co-ordinate system.<br>PC.3 Describe the functions used in using AutoCAD software<br>PC.4 Write the purpose of each function/mouse function, functional keys<br>PC.5 Set the standard paper size in the AutoCAD.<br>PC.6 Prepare the drawings in auto-cad by using limits, line, construction line, ray, trim, extend, erase.<br>PC.7 Use commands to prepare the drawings- circle, rectangle, copy, move, offset, rotate.<br>PC.8 Describe the purpose of array, mirror, scale, stretch, polyline, polygon, and arc.<br>PC.9 Use commands array, mirror, scale, stretch, polyline, polygon, and arc.<br>PC.10 Identify the proper commands and draw the given drawings in auto-cad.<br>PC.11 Describe the purpose of commands spline, ellipse, revision cloud, region, explode, join, break, break at a point.<br>PC.12 Use the commands properly while drafting in Auto-CAD.<br>PC.13 Describe point, point style, divide, measure, fillet, chamfer, blend curve<br>PC.14 Use commands point, point style, divide, measure, fillet, chamfer, blend curve<br>PC.15 Identify the proper commands and draw the given drawings in auto-cad.<br>PC.16 Describe the commands hatch, gradient, details of sectional view.<br>PC.17 Use/operate the commands hatch, gradient, details of sectional view.<br>PC.18 Identify the commands for proper sectioning methods as per the material. | - | 100 | - | - |

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| | PC.19 Describe the commands text, mtext, text style, arc aligned text, mirror text<br>PC.20 Use the commands text, mtext, text style, arc aligned text, mirror text<br>PC.21 Use the commands for putting the text on the drawing.<br>PC.22 Draw the title block using those commands using auto-cad. & Provide dimension on the geometry by using auto-cad software.<br>PC.23 Describe solid modeling, 3d environment & toolbars, extrude, revolve, Boolean operation, sweep, loft, press pull, 3d move, 3d rotate, 3d array, 3d align, solid editing toolbar, primitives.<br>PC.24 Prepare the solid model by using the commands in auto-cad and do the editing whenever it is necessary to modify.<br>PC.25 Explain the types of plotters & Plot the drawing with the help of auto-cad software. | | | | |
| **NOS / Module :**<br><br>**MSME/ADCNC/03**<br><br>Create, Generate and Execute CNC Program for Manufacturing Process | PC.1 Compare the conventional machines with CNC machines & Describe the codes and its function<br>PC.2 Use codes and Write programmes& Do practice on CNC by using G-codes and M-codes.<br>PC.3 Write a programme for Chamfer, circular movement, label setting<br>PC.4 write a program for contouring operation taking tool compensation by setting the label.<br>PC.5 Describe pocketing , polar movement, peck drilling, mirror cycle, datum shift in CNC programming<br>PC.6 Do the pocketing practice of rectangular and circular type.<br>PC.7 Use polar movement, peck drilling, mirror cycle, datum shift, and peck drilling cycle on the machine.<br>PC.8 Do practice on m-codes and g-codes for turning. & Run the cycle for rough turning, facing, chamfering.<br>PC.9 Write codes for grooving and peck drilling and threading<br>PC.10 Demonstrate grooving and peck drilling and threading (internal & external)<br>PC.11 Do practice by running the machine using sub-programme for boring, centre drilling.<br>PC.12 Describe CAM technology & Explain the benefits of CAM & Identify the toolbar and use functional key.<br>PC.13 Describe line , rectangle , rectangle shape, circle & arc, fillet ,fillet chain, chamfer , chamfer chain , polygon , ellipse & Use the icon for the required command to draw the assigned geometry.<br>PC.14 Describe translate, mirror, rotate, trim, spline, scale, move to origin, offset, offset contour, rectangular array & Do the 2-D modeling by using the icons for different command.<br>PC.15 Describe the purpose, function and procedure for letter, point, spiral, and helix, break two pieces, trim many joint entity, close arc, break many pieces, simplify. & Do modeling using these icons of Master-CAM.<br>PC.16 Describe break at intersection, break circle, break drafting into line, convert to nurbs, modify spline, x hatch , dimension tools , dimension option , note.& Do modeling using these icons of Master-CAM.<br>PC.17 Explain surface modeling, 3D Environment, & Describe the use of 3D tool bar, draft, extrude, fillet, trim.<br>PC.18 Demonstrate introduction to surface modeling, 3D Environment, used of 3D tool bar, draft, extrude, fillet, trim.Create 3-D models using these icons.<br>PC.19 Describe the function of icons such as ruled / lofted, revolved, offset, swept & Generate 3-Dprofile using those icons.<br>PC.20 Describe net surface, fence, extend, flat boundary, fill holes, remove boundary. Demonstrate split, untrim , 2 surface blend , 3 surface blend , 3fillet blend , project.<br>PC.21 Explain types of tool path, step to generate a tool path.<br>PC.22 Describe use of machining tool bars.<br>PC.23 Generate tool path using machining toolbar and other commands.<br>PC.24 Do the machining using the options like 2-D countering, pocketing, 2-D drilling, etc.<br>PC.25 Describe the function of the commands, surface rough ( pocket , parallel , radial ) surface finish (parallel , radial ), flow line , contour , shallow , project , pencil.<br>PC.26 Demonstrate the use of those commands and its use.<br>PC.27 Do practice of generating the tool path and programmes for lathe operation.<br><br>PC.28 OJT Report:<br><br>Mentioning the process and procedure | - | 100 | - | 100 |

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| | carried by the trainee on daily basis for<br>completing the assign task duly endorsed by<br>the authorized personnel and The report<br>must contain:<br>• Details of Department/ Organization<br>• Brief Job description<br>• Daily work activity<br>• Specific problem face if any with the solution.<br>• Technical Books referred during the OJT | | | | |
| **NOS / Module :**<br>**MSME/ADCNC/04**<br>Check and Inspect dimensions of machined Part using various Measuring instrument | PC.1 Describe significance of measurement and types of measurements.<br>PC.2 Explain how to do standardization of the measuring instruments.<br>PC.3 Explain types of gauges & Compare the gauges<br>PC.4 Use the gauges for checking the machined parts.<br>PC.5 Explain Telescopic gauge, slip gauge, standard wire gauge.<br>PC.6 Check the hole diameter and wire diameter using telescopic gauge and wire gauge respectively..<br>PC.7 Describe Limit gauge: plug gauge, thread plug gauge, snap gauge with sketch.<br>PC.8 Do inspection of a hole and internal thread using plug gauge and thread plug gauge.<br>PC.9 Describe Ring gauge, thread ring gauge with sketch.<br>PC.10 Check the size of a shaft and threaded shaft using ring gauge and thread ring gauge.<br>PC.11 Inspect the given job using CMM.<br>PC.12 Use height master and profile projector for the measurement. | - | 100 | - | - |
| **MSME/ES/02**<br>Employability skills | PC.1 Explain occupational health and Safety.<br>PC.2 Explain about safety rules.<br>PC.3 State the name and location of peopleresponsible for health and safety in theworkplace<br>PC.4Identify employability skills required for jobs in various industries.&Identify and explore learning and employability portals<br>PC.5Recognize the significance of constitutional values, including civic rights and duties, citizenship, responsibility towards society etc. and personal values and ethics such as honesty, integrity, caring and respecting others, etc.<br>PC.6Follow environmentally sustainable practices.&Recognize the significance of 21st Century Skills for employment<br>PC.7Practice the 21st Century Skills such as Self-Awareness, Behavior Skills, time management, critical and adaptive thinking, problem-solving, creative thinking, social and cultural awareness, emotional awareness, learning to learn for continuous learning etc. in personal and professional life<br>PC.8Use basic English for everyday conversation in different contexts, in person and over the telephone.<br>PC.9How to Minimize the team conflicts&Explain Ethics & values<br>PC.10Read and understand routine information, notes, instructions, mails, letters etc. written in English | 100 | - | - | - |

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| | PC.11Write short messages, notes, letters, e-mails etc. in English & Understand the difference between job and career<br>PC.12Prepare a career development plan with short- and long-term goals, based on aptitude &Discuss the main types of electronic funds transfers<br>PC.13Follow verbal and non-verbal communication etiquette and active listening techniques in various settings & work collaboratively with others in a team<br>PC.14Communicate and behave appropriately with all genders and PwD& escalate any issues related to sexual harassment at workplace according to POSH Act.<br>PC.15 Select financial institutions, products and services as per requirement & carry out offline and online financial transactions, safely and securely.<br>PC.16 Identify common components of salary and compute income, expenses, taxes, investments etc& identify relevant rights and laws and use legal aids to fight against legal exploitation<br>PC.17 Operate digital devices and carry out basic internet operations securely and safely & use e- mail and social media platforms and virtual collaboration tools to work effectively<br>PC.18 Use basic features of word processor, spreadsheets, and presentations.<br>PC.19 Identify different types of Entrepreneurship and Enterprises and assess opportunities for potential business through research & develop a business plan and a work model, considering the 4Ps of Marketing Product, Price, Place andPromotion.<br>PC.20 Identify sources of funding, anticipate, and mitigate any financial/ legal hurdles for the potential business opportunity<br>PC.21 Identify different types of customers & identify and respond to customer requests and needs in a professional manner.<br>PC.22 Follow appropriate hygiene and grooming standards<br>PC.23 Create a professional Curriculum vitae (Résumé) & search for suitable jobs using reliable offline and online sources such as Employment exchange, recruitment agencies, newspapers etc. and job portals, respectively<br>PC.24 Apply to identified job openings using offline /online methods as per requirement & answer questions politely, with clarity and confidence, during recruitment and selection<br>PC.25 identify apprenticeship opportunities and register for it as per guidelines and requirements | | | | |
| | **Total Marks** | **200** | **300** | **-** | **100** |

## Annexure VII: Assessment Strategy

This section includes the processes involved in identifying, gathering, and interpreting information to evaluate the Candidate on the required competencies of the program.

*Mention the detailed assessment strategy in the provided template.*

**1. Assessment System Overview:**

- Batches are assigned to the MSME NSQF Assessment Agency via email for the assessment.

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- MSME NSQF Assessment Agency sends the assessment confirmation to respective TC.
- MSME NSQF Assessment Agency deploys the certified Assessor for executing the assessment at respective TC via online / offline mode.
- MSME NSQF Assessment Agency & respective TC Internal Assessment cell monitors the assessment process & records.

**2. Testing Environment:**

- MSME NSQF Assessment Agency confirms the Assessment location, date and time
- For number of candidates more than 30 separate assessors are assigned for the assessment.
- MSME NSQF Assessment Agency & respective assessor confirms that the allotted time to the candidates to complete Theory & Practical Assessment is correct.

**3. Assessment Quality Assurance levels/Framework:**

- Each TC Submits the Question Bank for the individual subject Theory &Practice separately, submits to MSME NSQF Assessment Agency and it is verified by the MSME NSQF Assessment Agency Committee members.
- Questions are mapped to the specified assessment criteria
- All the assessors & Trainers are well qualified & trained to carry out the specified task.

**4. Types of evidence or evidence-gathering protocol:**

- Online Link is send by MSME NSQF Assessment Agency to respective TC & Assessor. Reporting of the assessor from assessment location is verified by the MSME NSQF Assessment Agency through the online Meeting Link. Students are also required to join for the online link for verification by the MSME NSQF Assessment Agency.
- Assessment Photographs are shared with the MSME NSQF Assessment Agency & are also with the respective TC.

**5. Method of verification or validation:**

- Online Link is send by MSME NSQF Assessment Agency to respective TC & Assessor. Reporting of the assessor from assessment location is verified by the MSME NSQF Assessment Agency through the online Meeting Link. Students are also required to join for the online link for verification by the MSME NSQF Assessment Agency.

**6. Method for assessment documentation, archiving, and access:**

- The Assessment records are shared with MSME NSQF Assessment Agency & also stored at respective TC.
- Assessor fills the assessment report and shares with the MSME NSQF Assessment Agency.

**On the Job Training:**

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- Each module will be assessed separately.
- The candidate must score 60% marks to successfully complete the OJT.
- Learner will be assessed on the basis of OJT report followed by Viva
- Assessment will ensure that the Learner is able to:
    - ✓ Effective engagement with the customers / Subordinates and team
    - ✓ Understand the working of various tools and equipment
    - ✓ Understand the working environment of the industry

## Annexure VIII: Acronym and Glossary

**Acronym**

| Acronym | Description |
|---|---|
| **AA** | Assessment Agency |
| **AB** | Awarding Body |
| **ISCO** | International Standard Classification of Occupations |
| **NCO** | National Classification of Occupations |
| **NCrF** | National Credit Framework |
| **NOS** | National Occupational Standard(s) |
| **NQR** | National Qualification Register |
| **NSQF** | National Skills Qualifications Framework |
| **OJT** | On the Job Training |

**Glossary**

| Term | Description |
|---|---|
| **National Occupational Standards** | NOS define the measurable performance outcomes required from an individual engaged in a particular task. They list down what an individual performing that task should know and also do. |

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|---|---|
| **(NOS)** | |
| **Qualification** | A formal outcome of an assessment and validation process which is obtained when a<br>competent body determines that an individual has achieved learning outcomes to given standards |
| **Qualification File** | A Qualification File is a template designed to capture necessary information of a Qualification from the perspective of NSQF compliance. The Qualification File will be normally submitted by the awarding body for the qualification. |
| **Sector** | A grouping of professional activities on the basis of their main economic function, product, service or technology. |
| **Short Term Training (STT)** | STT/ Short -term skilling means any vocational training program undertaken for less than a year (Theory + Practical + OJT). https://ncvet.gov.in/sites/default/files/NCVET.pdf |

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