



## QUALIFICATION FILE

### Assistant Computer Technician

Short-Term Training (STT)  Long-Term Training (LT)  Apprenticeship

Upskilling  Dual/Flexi Qualification  For ToT  For ToA

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

NCrF/NSQF Level: 3

Submitted By:

NATIONAL INSTITUTE OF ELECTRONICS AND INFORMATION TECHNOLOGY (NIELIT)

NIELIT Bhawan,  
Plot No. 3, PSP Pocket, Sector-8,  
Dwarka, New Delhi-110077

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## Section 1: Basic Details

1. Qualification Name	Assistant Computer Technician																
2. Sector/s	Electronics																
3. Type of Qualification: <input type="checkbox"/> New : <input checked="" type="checkbox"/> Revised <input type="checkbox"/> Has Electives/Options <input type="checkbox"/> OEM	NQR Code & version of the existing /previous qualifications: 2022/EHW/NIELIT/05326	Qualification Name of existing/previous version: Assembly & Maintenance Assistant (Personal Computer)															
4. a. OEM Name b. Qualification Name (Wherever applicable)	—																
5. National Qualification Register (NQR) Code & Version	QG-03-EH-02853-2024-V2-NIELIT	6. NCrF/NSQF Level: 3															
7. Award (Certificate/Diploma/Advance Diploma/ Any Other	Certificate																
8. Brief Description of the Qualification	<p><b>Nature:</b> The Certificate course is targeted for creating qualified professionals in the field of assembling and troubleshooting of Computers. Qualification has been developed in consultation with industry experts in the domain, aiming at Empowering the future workforce with necessary skills for employment and entrepreneur development of the qualifier.</p> <p><b>Purpose:</b> This course will enable the students to understand the fundamentals of Computer and enabling them to assemble, troubleshoot and installation of hardware, software &amp; peripherals devices of Computer.</p>																
9. Eligibility Criteria for Entry for Student/Trainee/Learner/Employee	<p><b>a. Entry Qualification &amp; Relevant Experience:</b></p> <table border="1"> <thead> <tr> <th>S. No.</th> <th>Academic/Skill Qualification (with Specialization - if applicable)</th> <th>Required Experience (with Specialization - if applicable)</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>10th or Equivalent</td> <td>No Experience required</td> </tr> <tr> <td>2.</td> <td>8th Class Pass with 2 years of NTC/ NAC</td> <td>No Experience required</td> </tr> <tr> <td>3.</td> <td>8th Grade pass</td> <td>3 years of relevant experience</td> </tr> <tr> <td>4.</td> <td>Previous relevant Qualification of NSQF Level 2</td> <td>1.5 year relevant experience</td> </tr> </tbody> </table>		S. No.	Academic/Skill Qualification (with Specialization - if applicable)	Required Experience (with Specialization - if applicable)	1.	10th or Equivalent	No Experience required	2.	8th Class Pass with 2 years of NTC/ NAC	No Experience required	3.	8th Grade pass	3 years of relevant experience	4.	Previous relevant Qualification of NSQF Level 2	1.5 year relevant experience
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1.	10th or Equivalent	No Experience required															
2.	8th Class Pass with 2 years of NTC/ NAC	No Experience required															
3.	8th Grade pass	3 years of relevant experience															
4.	Previous relevant Qualification of NSQF Level 2	1.5 year relevant experience															

		<b>b. Age:</b> 16																	
10.	<b>Credits Assigned to this Qualification, Subject to Assessment (as per National Credit Framework (NCrF))</b>	11 Credits			<b>11. Common Cost Norm Category (I/II/III) (wherever applicable):</b> Category-II														
12.	<b>Any Licensing requirements for Undertaking Training on This Qualification (wherever applicable)</b>	NA																	
13.	<b>Training Duration by Modes of Training Delivery (Specify <b>Total Duration</b> as per selected training delivery modes and as per the requirement of the qualification)</b>	<input checked="" type="checkbox"/> Offline <input type="checkbox"/> Online <input type="checkbox"/> Blended <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center; padding: 5px;">Training Delivery Modes</th> <th style="text-align: center; padding: 5px;">Theory (Hours)</th> <th style="text-align: center; padding: 5px;">Practical (Hours)</th> <th style="text-align: center; padding: 5px;">OJT Mandatory (Hours)</th> <th style="text-align: center; padding: 5px;">ES (Hours)</th> <th style="text-align: center; padding: 5px;">Total (Hours)</th> </tr> </thead> <tbody> <tr> <td style="text-align: center; padding: 5px;">Classroom (Offline)</td> <td style="text-align: center; padding: 5px;">90</td> <td style="text-align: center; padding: 5px;">180</td> <td style="text-align: center; padding: 5px;">30</td> <td style="text-align: center; padding: 5px;">30</td> <td style="text-align: center; padding: 5px;">330</td> </tr> </tbody> </table> <p style="text-align: center; margin-top: 10px;">The mode of delivery shall be based on the regional demand and can be offered in any of the above modes mentioned.</p>						Training Delivery Modes	Theory (Hours)	Practical (Hours)	OJT Mandatory (Hours)	ES (Hours)	Total (Hours)	Classroom (Offline)	90	180	30	30	330
Training Delivery Modes	Theory (Hours)	Practical (Hours)	OJT Mandatory (Hours)	ES (Hours)	Total (Hours)														
Classroom (Offline)	90	180	30	30	330														
14.	<b>Aligned to NCO/ISCO Code/s (if no code is available mention the same)</b>	NCO-2015/3512.0101																	
15.	<b>Progression path after attaining the qualification (Please show Professional and Academic progression)</b>	Technician -> Supervisor																	
16.	<b>Other Indian languages in which the Qualification &amp; Model Curriculum are being submitted</b>	Qualification files are available in English and Hindi language.																	
17.	<b>Is similar Qualification(s) available on NQR-if yes, justification for this qualification</b>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No URLs of similar Qualifications:																	
18.	<b>Is the Job Role Amenable to Persons with Disability</b>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No																	
19.	<b>How Participation of Women will be Encouraged</b>	Through funding from the Government under various schemes and projects.																	
20.	<b>Are Greening/ Environment Sustainability Aspects Covered (Specify the NOS/Module which covers it)</b>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No																	
21.	<b>Is Qualification Suitable to be Offered in Schools/Colleges</b>	<b>Schools</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <b>Colleges</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No																	

22.	<b>Name and Contact Details of Submitting / Awarding Body SPOC</b> <i>(In the case of CS or MS, provide details of both Lead AB &amp; Supporting ABs)</i>	From NIELIT: Name: Lairenjam Ithoi Chanu, Scientist-D Email: <a href="mailto:ithoi.l@nielit.gov.in">ithoi.l@nielit.gov.in</a> Contact No: 7005825413 Website: <a href="https://www.nielit.gov.in">https://www.nielit.gov.in</a>					
23.	<b>Final Approval Date by NSQC: 25.07.2024</b>	<b>24. Validity Duration: 3 Years</b>				<b>25. Next Review Date: 25.07.2027</b>	

## Section 2: Module Summary

### NOS/s of Qualifications

- i. Identification of Computer Hardware Components and Peripherals devices.
- ii. Installation of Computer Hardware Components and setting up of peripherals devices
- iii. Installation and Configuration of Computer Software and Application
- iv. Troubleshooting and Maintenance of Computer System

### Mandatory NOS/s of Qualifications

**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.	Total	Th.	Pr.	Total	The weightage (%) (if applicable)
1	NOS 1: Identification of Computer Hardware Components and Peripherals devices	Code: NIE/ELE/N09 18 Version: 1.0	Core	3	2	20	40	60	50	22	72	20.57
2	NOS 2: Installation of Computer Hardware Components and setting up of peripherals devices	Code: NIE/ELE/N09 20 Version: 1.0	Core	3	2	20	40	60	50	23	73	20.85
3	NOS 3: Installation and Configuration of Computer Software	Code: NIE/ELE/N09 19	Core	3	3	30	60	90	60	27	87	24.85

		Version: 1.0										
4	NOS 4: Troubleshooting and Maintenance of Computer System	Code: NIE/ELE/N09 17 Version: 1.0	Core	3	2	20	40	60	40	18	58	16.57
<b>Sub Total</b>				9	90	180	270	200	90	290	82.84	
5	NOS 5: Employability Skills	Code: DGT/VSQ/N 0101 Version: 1.0	Non-core	3	1	0	0	30	0	0	30	8.57
6	NOS6: Project/ OJT	--	Non-core	3	1	0	0	30	0	0	30	8.57
<b>Total Marks</b>				11	<b>330</b>			<b>350</b>			<b>100</b>	

Assessment Components	NOS Included	Duration (in mins)	Marks
Theory Paper 1: Comprehensive Study of Computer Hardware: Identification, Installation, and Configuration of Peripheral Devices	1 , 2	90	100
Theory Paper 2: Systematic Procedures for Software Installation and Maintenance Troubleshooting	3 , 4	90	100
Practical-1	1 , 2 , 3 , 4	180	90
Internal Assessment	6	-	30
Project	1 , 2 , 3 , 4 , 5 , 6	-	30
		<b>Total</b>	<b>350</b>

\*\*\*Assessment strategy shall be as per NIELIT Norms prevailing at times.

**Minimum Pass Percentage – The pass percentage is 50% in each assessment component (as mentioned in the above table) with the aggregate pass percentage be 50%**

### Section 3: Training Related

1.	<b>Trainer's Qualification and experience in the relevant sector (in years) (as per NCVET guidelines)</b>	Faculties B.Tech /B.E (CS/IT/EC) with 1 year relevant experience  One Support / Lab Instructor with at least Diploma in (CS/IT/EC) with 2 years relevant experience.
2.	<b>Master Trainer's Qualification and experience in the relevant sector (in years) (as per NCVET guidelines)</b>	B. Tech /B. E (CS/IT/EC) with 2 years relevant experience
3.	<b>Tools and Equipment Required for Training</b>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Details available in Annexure-II
4.	<b>In Case of a Revised Qualification, Details of Any Upskilling Required for Trainer</b>	NA

### Section 4: Assessment Related

1.	<b>Assessor's Qualification and experience in relevant sector (in years) (as per NCVET guidelines)</b>	B. Tech /B. E (CS/IT/EC) with 2 years relevant experience
2.	<b>Proctor's Qualification and experience in relevant sector (in years) (as per NCVET guidelines)</b>	The assessor carries out theory online assessments through the remote proctoring methodology. Theory examination would be conducted online and the paper comprise of MCQ. Conduct of assessment is through trained proctors. Once the test begins, remote proctors have full access to the candidate's video feeds and computer screens. Proctors authenticate the candidate based on registration details, pre-test image captured and I-card in possession of the candidate. Proctors can chat with candidates or give warnings to candidates. Proctors can also take screenshots, terminate a specific user's test session, or re-authenticate candidates based on video feeds.
3.	<b>Lead Assessor's/Proctor's Qualification and experience in relevant sector (in years) (as per NCVET guidelines)</b>	An External Examiner/ Observer (Subject matter expert) are deployed including NIELIT scientific officers who are subject expert for evaluation of Practical examination/ internal assessment / Project/ Presentation/ assignment and Major Project (if applicable). Qualification is generally B.Tech
4.	<b>Assessment Mode (Specify the assessment</b>	Online for Theory Online/ Offline/ Blended for other assessment components depending on

	<i>mode)</i>	the region where the assessment is conducted
5.	<b>Tools and Equipment Required for Assessment</b>	<input checked="" type="checkbox"/> Same as for training <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (Details to be provided in Annexure-II )

### Section 5: Evidence of the need for the Qualification

1.	<b>Latest Skill Gap Study (not older than 2 years) (Yes/No):</b> Yes, Available in Annexure-C: Evidence of Need
2.	<b>Latest Market Research Reports or any other source (not older than 2 years) (Yes/No):</b> Yes, Available at Annexure-C: Evidence of Need
3.	<b>Government /Industry initiatives/ requirement (Yes/No):</b> Yes, Available at Annexure-C: Evidence of Need
4.	<b>The number of Industry validation provided:</b> 15
5.	<b>Estimated nos. of persons to be trained and employed:</b> 500 persons per year shall be trained.
6.	<b>Evidence of Concurrence/Consultation with Line Ministry/State Departments:</b> NIELIT is recognized as AB and AA under Government Category. NIELIT is an HRD arm of MeitY, therefore, the Line Ministry Concurrence is not required.

### Section 6: Annexure & Supporting Documents Check List

1.	<b>Annexure:</b> NCrF/NSQF level justification based on NCrF level/NSQF descriptors ( <i>Mandatory</i> )	Available at Annexure-I: Evidence of Level
2.	<b>Annexure:</b> List of tools and equipment relevant for qualification ( <i>Mandatory, except in case of the online course</i> )	Available at Annexure-II: Tools and Equipment
3.	<b>Annexure:</b> Detailed Assessment Criteria ( <i>Mandatory</i> )	Available at Annexure-VI: Detailed Assessment Criteria
4.	<b>Annexure:</b> Assessment Strategy ( <i>Mandatory</i> )	Available at Annexure-VII: Detailed Assessment Strategy
5.	<b>Annexure:</b> Blended Learning ( <i>Mandatory, in case the selected Mode of delivery is "Blended Learning"</i> )	Available at Annexure-V: Blended Learning
6.	<b>Annexure:</b> Industry Validation Summary	Available at Annexure-III: Industry Validation
7.	<b>Annexure:</b> Multiple Entry-Exit Details ( <i>Mandatory, in case</i>	NA

	<i>qualification, has multiple Entry-Exit)</i>	
8.	<b>Annexure:</b> Acronym and Glossary (Optional)	Available at Annexure-X: Acronym and Glossary
9.	<b>Supporting Document:</b> Model Curriculum (Mandatory – Public view)	Available at Annexure-A: Model Curriculum
10.	<b>Supporting Document:</b> Career Progression (Mandatory - Public view)	Available at Annexure-VIII: Career Progression
11.	<b>Supporting Document:</b> Occupational Map (Mandatory)	Available at Annexure-IX: Occupational Map
12.	<b>Supporting Document:</b> Assessment SOP (Mandatory)	Available at Annexure-D: Examination SoP
13.	Any other document you wish to submit:	NA

#### Annexure I: 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	The individuals will be able to carry out the job to assemble, maintain and troubleshoot which are helpful in running the Computer error free.	The Individuals will carries out the job of assembling, maintenance etc. which are routine and predictable	3
Professional and Technical Skills/ Expertise/ Professional Knowledge	The individuals will gain knowledge about the working of the computer and its various software and hardware components.	The Individuals will have the basic facts, knowledge and the process on assembling, maintaining & troubleshooting the computer.	3
Employment Readiness & Entrepreneurship Skills & Mind-set/Professional Skill	The individuals will gain skills on assembling the computer, setting the BIOS, installation of the Operating system and configuring it as per the requirement. They will also have skills to run the utility tools, troubleshoot, identify and rectify the error of the system.	The individuals will be proficient in assembling, maintaining & troubleshooting the computer whenever required based on the theoretical and practical skills gained during the course	3

Broad Learning Outcomes/Core Skill	The individuals will acquire the basic communication skills like written and Oral and will be able to interact with different stakeholders like vendors, clients and users	The individuals will be able to communicate with the client orally or through written to understand the problem and to provide solution starting from Assembling, Configuration, Maintenance and troubleshooting the Computer.	3
Responsibility	The individuals are responsible for maintaining the computer from failure and to learn new technology to provide better solution.	The Individuals are responsible for keeping the computer error free and to update their knowledge for any new technology available in the market so as to provide better solution.	3

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

#### List of Tools and Equipment

- Desktop Computer with Windows 7 or later
- Different types of Mother Board
- Different types of Cards
  - VGA, AGP, NIC, Audio,
- Different types of Tools and instrument
  - BGA Machine□ Soldering and Desoldering Station, Oscilloscope 25-100 MHz, Multi-meter, Digital IC Tester, Analog IC Tester, Function Generator, Power Supply 0-30 V, Small screw Driver kit, Different types of small Plair set, De-soldering pump, soldering wire, Twizer, Bond make liquid flux 0% some respective components etc.
- Diagnostic Card for Desktop and Laptop
- Operating System and other supporting software.

#### Classroom Aids

The aids required to conduct sessions in the classroom are:

1. LCD Projector
2. Pin-up Board
3. White Board

**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
1	M/s Awpara Technologies Pvt. Ltd.	Hemam Bijen Singh	Director	STPI, MIMS Ground Floor, Canchipur, Imphal-795003, Manipur	9845241822	<a href="mailto:Bijen.hemam@awpara.com">Bijen.hemam@awpara.com</a>
2	Databasket	Jiban M	Admin	Uripok kangchup Road, Imphal West, Manipur-795001	7085980857	<a href="mailto:contact@databasket.co.in">contact@databasket.co.in</a>
3	EcoTec Industries	KSH Haimo	Proprietor	Khabam Lamkhai, Imphal East, Manipur-795002	9436437574	<a href="mailto:ecoteckhabam@gmail.com">ecoteckhabam@gmail.com</a>
4	Globizs Web Solutions Pvt Ltd	Roshnikumar Yambem	Managing Director	Imphal, Manipur-795001	8415927037	<a href="mailto:kumar@globizs.com">kumar@globizs.com</a>
5	M/S Electrocybemetics	Jeelen Kumar Sarungbam	Proprietor	Sagolband Tera, Lukram Leirak, Imphal-795001, Manipur	6909369699	<a href="mailto:care@electrocybemetics.com">care@electrocybemetics.com</a>
6	M/s CD Byte Computers	S. Tarun Kumar	Proprietor	Yaiskul Police Lane Imphal-795001, Manipur	8794722818	<a href="mailto:cdbytecomputers@gmail.com">cdbytecomputers@gmail.com</a>
7	M/s NE Brothers Entertainments Pvt Ltd	Jafri Elangbam	Service Manager	1st, 2nd & 3rd Floor, Laihui Building, Keishamthong Keithel, Imphal West, Manipur-795001	9089077985	<a href="mailto:jafri@nebrothers.com">jafri@nebrothers.com</a>
8	M/s Khuman Media Pvt. Ltd	Th. Sekenjit Singh	Director	Pangei Bazar, Imphal-795114	8414912527	<a href="mailto:Khumanmedia24@laming.com">Khumanmedia24@laming.com</a>
9	M/s Lamzing Technologies Pvt. Ltd.	Ailan Maibam	Director	Singjamei, Chingamakhong, Chongtham, Leikai, Imphal-795008, Manipur	9963382225	<a href="mailto:Ailan.maibam@lamzing.com">Ailan.maibam@lamzing.com</a>

10	M/s Leirick Computers	Elizabeth Potsangbam	Proprietor	Singjamei, Opp. Super Market, Imphal-795001, Manipur	7005512400	<a href="mailto:Enoubi24@yahoo.com">Enoubi24@yahoo.com</a>
11	Tin-Tin Power Up	S Kumudchandra Singh	Proprietor	Pishum Thong Ningom Leikai, Imphal West, Manipur-795001	9862271561	<a href="mailto:tintinpower@gmail.com">tintinpower@gmail.com</a>
12	Computer Source	Nitai Paul	Proprietor	S.M. Electronic Market, 37, A.K. Road, Agartala	9436125176	<a href="mailto:Computersource_agt@yahoo.com">Computersource_agt@yahoo.com</a>
13	Krishna Industrial Services	Debajit Dey	Proprietor	Badharghat chowmuhani, Agartala, Tripura (W)-799003	9862770077	<a href="mailto:krshnaindstrlsrvcs@gmail.com">krshnaindstrlsrvcs@gmail.com</a>
14	JB Youth Computer Solution & Educational Society	Nishi Kanta Das	Sec & Project Coordinator	Badharghat Chowmuhani, Siddhi Ashram, Agartala West Tripura-799003	9436740983	<a href="mailto:ibyacademy@gmail.com">ibyacademy@gmail.com</a>
15	Bada Biplab Power Solutions LLP	Iduli Debbarma	Designated Partner	Agartala, West Tripura, 799003	9436740983	<a href="mailto:bbpsllp@gmail.com">bbpsllp@gmail.com</a>

#### 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
2024	500	100	200	50	0	0
2025	500	100	200	50	0	0
2026	1000	200	400	100	0	0

**Annexure-V: Blended Learning**

Blended Learning Estimated Ratio &amp; Recommended Tools:

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	Online interaction platforms like JitSi Meet, Bharat VC, Google Meet, MS Teams, etc.	60:40
2	Imparting Soft Skills, Life Skills, and Employability Skills /Mentorship to Learners	Online interaction platforms like JitSi Meet, Bharat VC, Google Meet, MS Teams, etc.	60:40
3	Showing Practical Demonstrations to the learners	Online interaction platforms like JitSi Meet, Bharat VC, Google Meet, MS Teams, etc.	60:40
4	Imparting Practical Hands-on Skills/ Lab Work/ workshop/ shop floor training	NA	100:0
5	Tutorials/ Assignments/ Drill/ Practice	Online interaction platforms like JitSi Meet, Bharat VC, Google Meet, MS Teams, etc.	50:50
6	Proctored Monitoring/ Assessment/ Evaluation/ Examinations	NIELIT Remote Proctored Software	Online: 100% Theory Offline: 100% Practical
7	On Job Training (OJT)/ Project Work Internship/ Apprenticeship Training	Simulated Platform	Either 100% online on virtual environment Or 100% offline in the Industry.

**Annexure-VI: Detailed Assessment Criteria**

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

NOS/Module Name	Assessment Criteria for Performance Criteria/Learning Outcomes	Theory Marks	Practical Marks	Total
<p>NOS 1: Identification of Computer Hardware Components and Peripherals devices</p> <p>Code: NIE/ELE/N0918</p>	<p><b>Identification of Computer Types and Hardware Components</b></p> <p>PC1: Students shall identify different types of computers, including desktop, laptop, and server systems, and describe their working principles.</p> <p>PC2: Students shall differentiate between hardware and software components, explaining the function of key hardware elements such as the CPU, motherboard, and RAM</p> <p><b>Recognition and Installation of Input/Output Devices and Peripherals</b></p> <p>PC3: Students shall recognize common input/output devices (e.g., keyboard, mouse, printer, monitor) and explain their roles in a computer system.</p> <p>PC4: Students shall demonstrate the ability to install and configure various input/output devices and peripheral components.</p> <p><b>Identification and Configuration of Motherboards, Memory, and Storage Devices</b></p> <p>PC5: Students shall identify different types of motherboards, memory (RAM, ROM), and storage devices (HDD, SSD) and explain their functions within the computer system.</p> <p>PC6: Students shall demonstrate the installation and configuration of motherboards, memory modules, and storage devices.</p>	50	22	72

	<p><b>Identification and Use of Computer Ports and Connectors</b></p> <p>PC7: Students shall identify different types of computer ports (USB, HDMI, Ethernet) and connectors and explain their purposes.</p> <p>PC8: Students shall demonstrate the proper connection of peripherals and devices using various ports and connectors, ensuring correct setup and functionality</p>			
<p>NOS 2: Installation of Computer Hardware Components and setting up of peripherals devices</p> <p>Code: NIE/ELE/N0920</p>	<p><b>Installation of CPU Components</b></p> <p>PC1: Correctly install all components within the CPU cabinet, including the case, fan, power supply, heat sink, CPU, and motherboard</p> <p><b>Installation of Storage Devices</b></p> <p>PC2: Install different types of storage devices, including RAM, hard disk drives, and SSDs, according to specifications</p> <p>PC3: Ensure all storage devices are properly connected to the motherboard and power supply.</p> <p><b>Setup of Peripheral Devices</b></p> <p>PC4: Successfully install and connect peripheral devices such as printers and scanners to the computer system</p> <p>PC5: Execute the necessary setup programs for each peripheral device to ensure functionality</p> <p><b>Adherence to Safety Procedures</b></p> <p>PC6: Adhere to established safety procedures while handling and installing computer equipment.</p> <p>PC7: Demonstrate safe handling techniques to prevent damage to components and ensure personal safety.</p>	50	23	73

<p>NOS 3: Installation and Configuration of Computer Software Code: NIE/ELE/N0919</p>	<p><b>Boot Processes and BIOS Configuration</b></p> <p>PC1: Describe the booting process in DOS and Windows environments.</p> <p>PC2: Access and navigate the BIOS setup utility, configuring boot options and settings effectively.</p> <p><b>Disk Management and Operating System Installation</b></p> <p>PC3: Format hard disks and partition drives according to specified requirements.</p> <p>PC4: Execute the installation of various operating systems, including configuring dual-boot setups as necessary</p> <p><b>Application Software Installation and Configuration</b></p> <p>PC5: Identify various types of application software relevant to user needs and install them correctly</p> <p>PC6: Install and configure antivirus software to provide optimal protection against threats.</p> <p><b>Command Prompt Execution and Security Management</b></p> <p>PC7: Execute various Windows command prompt commands effectively to manage software and system configurations.</p> <p>PC8: Reset the BIOS password securely while ensuring compliance with security protocols</p>	60	27	87
<p>NOS 4: Troubleshooting and Maintenance of Computer System Code: NIE/ELE/N0917</p>	<p><b>Understanding Troubleshooting Methods and Backup Procedures</b></p> <p>PC1: Demonstrate knowledge of various troubleshooting methodologies.</p> <p>PC2: Identify and apply different backup techniques based on system requirements.</p>	40	18	58

	<p><b>Execution of System Utility and Diagnostic Tools</b></p> <p>PC3: Effectively execute system utility tools to diagnose and enhance system performance.</p> <p>PC4: Analyze the results from diagnostic tools to identify potential system issues.</p> <p><b>Recognition and Troubleshooting of Computer Components</b></p> <p><b>PC5:</b> Identify various hardware components and their functions within a computer system.</p> <p>PC6: Troubleshoot and resolve issues related to the operating system and its drivers.</p> <p><b>Configuration and Management of Antivirus Software</b></p> <p>PC7: Configure antivirus software settings to provide optimal protection against malware and viruses.</p> <p>PC8: Execute scans and updates of antivirus software to ensure system security.</p>			
<p>NOS 5: Employability Skills</p> <p>Code: DGT/VSQ/N0101</p>	<p>Explanation of the following:</p> <ol style="list-style-type: none"> <li>1. Need for employability skills</li> <li>2. Various constitutional and personal values.</li> <li>3. Different environmentally sustainable practices and their importance</li> <li>4. 21st-century skills and their importance</li> <li>5. How to use the basic spoken English language</li> <li>6. Do's and don'ts of effective communication</li> <li>7. Inclusivity and its importance</li> <li>8. Different types of disabilities and appropriate communication and behaviour towards PwD</li> <li>9. Different types of financial products and services</li> <li>10. How to compute income and expenses</li> </ol>		30	

	<ul style="list-style-type: none"> <li>11. Importance of maintaining safety and security in financial transactions</li> <li>12. Different legal rights and laws</li> <li>13. How to operate digital devices and applications safely and securely</li> <li>14. Ways to identify business opportunities</li> <li>15. Types of customers and their needs</li> <li>16. How to apply for a job and prepare for an interview</li> <li>17. Apprenticeship scheme and the process of registering on apprenticeship portal</li> </ul>	
NOS 6: Project/OJT	<ul style="list-style-type: none"> <li>1. Setting up of a computer by getting different components available</li> </ul> <p>Or</p> <ul style="list-style-type: none"> <li>1. Undergoing on job training to gain more practical knowledge and to get familiar with the working environment</li> </ul>	30
	<b>Total Marks</b>	<b>350</b>

#### **Annexure-VII: Assessment Strategy**

Assessment of the qualification evaluates candidates to ascertain that they can integrate knowledge, skills and values for carrying out relevant tasks as per the defined learning outcomes and assessment criteria.

The underlying principle of assessment is fairness and transparency. The evidence of the outcomes and assessment criteria. Competence acquired by the candidate can be obtained by conducting Theory (Online), Practical assessment, Internal assessment, Project/Presentation/ Assignment, Major Project. The emphasis is on the practical demonstration of skills & knowledge gained by the candidate through the training. Each OUTCOME is assessed & marked separately. A candidate is required to pass all OUTCOMES individually based on the passing criteria.

#### **About Examination Pattern:**

1. The question papers for the theory and practical exams are set by the Examination wing (assessor) of NIELIT HQS.
2. The assessor assigns roll number.
3. The assessor carries out theory online assessments through remote proctoring methodology. Theory examination would be conducted online and the paper comprise of MCQ. Conduct of assessment are through trained proctors. Once the test begins, remote proctors have full access to

candidate's video feeds and computer screens. Proctors authenticate the candidate based on registration details, pre-test image captured and I- card in possession of the candidate. Proctors can chat with candidates or give warnings to candidates. Proctors can also take screenshots, terminate a specific user's test session, or re-authenticate candidates based on video feeds.

4. An External Examiner/ Observer may be deployed including NIELIT officials for evaluation of Practical examination/ internal assessment / Project/ Presentation/. Major Project (if applicable) would be evaluated preferably by external/ subject expert including NIELIT officials.
5. Pass percentage would be 50% marks in each component.
6. Candidates may apply for re-examination within the validity of registration (only in the assessment component in which the candidate failed).
7. For re-examination prescribed examination fee is required to be paid by the candidate only for the assessment component in which the candidate wants to reappear.
8. There would be no exemption for any paper/module for candidates having similar qualifications or skills.
9. The examination will be conducted in English language only.

**Quality assurance activities:** A pool of questions is created by a subject matter expert and moderated by other SME. Test rules are set beforehand. Random set of questions which are according to syllabus appears which may differ from candidate to candidate. Confidentiality and impartiality are maintained during all the examination and evaluation processes.

#### Annexure-X: 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
<b>National Occupational Standards (NOS)</b>	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.
<b>Qualification</b>	A formal outcome of an assessment and validation process which is obtained when a competent body determines that an individual has achieved learning outcomes to given standards
<b>Qualification File</b>	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.
<b>Sector</b>	A grouping of professional activities on the basis of their main economic function, product, service or technology.
<b>Long Term Training</b>	Long-term skilling means any vocational training program undertaken for a year and above. <a href="https://ncvet.gov.in/sites/default/files/NCVET.pdf">https://ncvet.gov.in/sites/default/files/NCVET.pdf</a>