# QUALIFICATION FILE – Standalone NOS

## Foundations of RPA

**☒ Horizontal/Generic ☒ Vertical/Specialization**

**☒ Upskilling ☐ Dual/Flexi Qualification ☐ For ToT ☐ For ToA**

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

**NCrF/NSQF Level: 4.5**

**Submitted By:**

**IT-ITeS Sector Skills Council NASSCOM (SSC NASSCOM)**
**Plot No. – 7, 8, 9 & 10**
**Sector – 126, Noida, Uttar Pradesh - 201303**

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# Section 1: Basic Details

<table>
<tr><td>1.</td><td>NOS</td><td colspan="2">Foundations of RPA</td></tr>
<tr><td>2.</td><td>Sector/s</td><td colspan="2">IT/ITeS</td></tr>
<tr><td>3.</td><td>Type of Qualification ☒ New ☐ Revised</td><td>NQR Code & version of the existing /previous qualification: (change to previous, once approved)</td><td>Qualification Name of the existing/previous version: (previous, once approved) Foundations of RPA</td></tr>
<tr><td>4.</td><td>National Qualification Register (NQR) Code & Version (Will be issued after NSQC approval.)</td><td>NG-4.5-IT-03792-2025-V1-NASSCOM & V1</td><td>5. NCrF/NSQF Level: 4.5</td></tr>
<tr><td>6.</td><td>Brief Description of the Standalone NOS</td><td colspan="2">This NOS describes the fundamentals of RPA.</td></tr>
<tr><td>7.</td><td>Eligibility Criteria for Entry for a Student/Trainee/Learner/Employee</td><td colspan="2">a. Entry Qualification & Relevant Experience:<br><br>**Relevant experience in job roles related to RPA/Computer Science/IT<br>The relevant experience would include work, internship and apprenticeship after completing relevant educational qualifications.<br><br>*PG/UG/Degree/Diploma in (Engg./Science)<br><br>
<table>
<tr><th>S. No.</th><th>Academic/Skill Qualification (with Specialization - if applicable)</th><th>Required Experience (with Specialization - if applicable)</th></tr>
<tr><td>1.</td><td>Completed 1st year of 3Y/4Y UG*</td><td>-</td></tr>
<tr><td>2.</td><td>Pursuing 3rd year of 3Y UG Diploma*</td><td>-</td></tr>
<tr><td>3.</td><td>Passed Class 12th or equivalent*</td><td>1.5 Years of relevant experience**</td></tr>
<tr><td>4</td><td>Previous relevant qualification of NSQF level 4</td><td>1.5 Years of relevant experience**</td></tr>
</table>
b. Age: NA</td></tr>
</table>

<table>
<tr><td>8.</td><td>Credits Assigned to this NOS-Qualification, Subject to Assessment (as per National Credit Framework (NCrF))</td><td>3 Credit</td><td>9. Common Cost Norm Category (I/II/III) (wherever applicable): II</td></tr>
<tr><td>10.</td><td>Any Licensing Requirements for Undertaking Training on This Qualification (wherever applicable)</td><td colspan="2">NA</td></tr>
<tr><td>11.</td><td>Training Duration by Modes of Training Delivery (Specify Total Duration as per selected training delivery modes and as per requirement of the qualification)</td><td colspan="2">☐ Offline Only ☐ Online Only ☒ Blended<br><br><table><tr><th>Training Delivery Mode</th><th>Theory (Hours)</th><th>Practical (Hours)</th><th>OJT (Hours)</th><th>Total (Hours)</th></tr><tr><td>Classroom (offline)</td><td>44</td><td>46</td><td>00</td><td>90</td></tr><tr><td>Online</td><td>44</td><td>46</td><td>00</td><td>90</td></tr></table><br>(Refer Blended Learning Annexure for details)</td></tr>
<tr><td>12.</td><td>Assessment Criteria</td><td colspan="2"><table><tr><th>Theory (Marks)</th><th>Practical (Marks)</th><th>Project (Marks)</th><th>Viva (Marks)</th><th>Total (Marks)</th><th>Passing %age</th></tr><tr><td>30</td><td>70</td><td>-</td><td>-</td><td>100</td><td>50%</td></tr></table></td></tr>
<tr><td>13.</td><td>Is the NOS Amenable to Persons with Disability</td><td colspan="2">☒ Yes ☐ No If “Yes”, specify applicable type of Disability: Visual, Hearing or Speech impairment, Locomotor Disability</td></tr>
<tr><td>14.</td><td>Progression Path After Attaining the Qualification, wherever applicable (Please show Professional and Academic progression)</td><td colspan="2">NA</td></tr>
<tr><td>15.</td><td>How will the participation of women be encouraged?</td><td colspan="2">The Program is gender neutral although to increase women's participation, organizations are keeping aside few seats to encourage female candidates.</td></tr>
<tr><td>16.</td><td>Other Indian languages in which the Qualification & Model Curriculum are being submitted</td><td colspan="2">Once approved the qualification will be available in Hindi or other Indian Languages.</td></tr>
<tr><td>17.</td><td>Is similar NOS available on NQR-if yes, justification for this qualification</td><td colspan="2">☐ Yes ☒ No URLs of similar Qualifications:</td></tr>
</table>

| | | | |
|---|---|---|---|
| **18.** | **Name and Contact Details Submitting / Awarding Body SPOC** *(In case of CS or MS, provide details of both Lead AB & Supporting ABs)* | **Name: Namrata Kapur**<br>**Email: Stadards@nasscom.in**<br>**Contact No.: 0120-4990111**<br>**Website: https://nasscom.in** | |
| **19.** | **Final Approval Date by NSQC: 18/02/2025** | **20. Validity Duration: 36 Months** | **21. Next Review Date: 18/02/2028** |

# Section 2: Training Related

| | | |
|---|---|---|
| 1. | **Trainer's Qualification and experience in the relevant sector (in years)** *(as per NCVET guidelines)* | **Educational Qualification:** Graduate (Engineering/ Technology/ Computer Science)<br><br>**Industry & training experience:** 2 years of industry experience in RPA. The industry experience would include work, internship, and apprenticeships undertaken after regular graduation.<br><br>**Certification:** "Trainer" mapped to the Qualification Pack "MEP/Q2601" Minimum accepted score is 80% aggregate |
| 2. | **Master Trainer's Qualification and experience in the relevant sector (in years)** *(as per NCVET guidelines)* | **Educational Qualification:** Graduate (Engineering/ Technology/ Computer Science)<br><br>**Industry & training experience:** 4 years of industry experience in RPA. The full-time experience would include work, internship, and apprenticeship undertaken after regular graduation.<br><br>**Certification:** "Master Trainer" mapped to the Qualification Pack "MEP/Q2602" Minimum accepted score is 90% aggregate. |
| 3. | **Tools and Equipment Required for the Training** | ☒Yes ☐No *(If "Yes", details to be provided in Annexure)* |
| 4. | **In Case of Revised NOS, details of Any Upskilling Required for Trainer** | NA |

# Section 3: Assessment Related

| | | |
|---|---|---|
| 1. | **Assessor's Qualification and experience in relevant sector (in years)** *(as per NCVET guidelines)* | **Educational Qualification:** Graduate (Engineering/ Technology/ Computer Science) |

| | | |
|---|---|---|
| | | **Industry & Training Experience:** 2 years of industry experience in RPA. The full-time experience would include work, internship, and apprenticeship undertaken after regular graduation.<br><br>**Certification:** "Assessor" mapped to the Qualification Pack "MEP/Q2701" Minimum accepted score is 80% aggregate. |
| 2. | **Proctor's Qualification and experience in relevant sector (in years)** *(as per NCVET guidelines), (wherever applicable)* | **Educational Qualification:** Graduate (Engineering/ Technology/ Computer Science)<br><br>**Industry & Training Experience:** 2 years of industry experience in RPA. The full-time experience would include work, internship, and apprenticeship undertaken after regular graduation.<br><br>**Certification:** "Assessor" mapped to the Qualification Pack "MEP/Q2701" Minimum accepted score is 80% aggregate. |
| 3. | **Lead Assessor's/Proctor's Qualification and experience in relevant sector (in years)** *(as per NCVET guidelines)* | **Educational Qualification:** Graduate (Engineering/ Technology/ Computer Science)<br><br>**Industry & Training Experience:** 4 years of industry experience in RPA. The full-time experience would include work, internship, and apprenticeship undertaken after regular graduation.<br><br>**Certification:** "Lead Assessor" mapped to the Qualification Pack "MEP/Q2702" Minimum accepted score is 90% aggregate. |
| 4. | **Assessment Mode** *(Specify the assessment mode)* | The assessment will consist of a blend of hands-on practical evaluations, and online proctored scenario-based multiple-choice questions ensuring a thorough evaluation of the individual's proficiency in learning outcomes, practical understanding, and real-world application of concepts. |
| 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) |

# Section 4: Evidence of the Need for Standalone NOS

*Provide Annexure/Supporting documents name*.

| | |
|---|---|
| 1. | Government /Industry initiatives/ requirement (Yes/No): Industry initiative |
| 2. | Number of Industry validation provided:11 |
| 3. | Estimated number of people to be trained: 500 |

| | |
|---|---|
| | As per the Gartner report for Uipath ,RPA will stay in the technology market although the technology will be tremendously upgraded by the application of AI and other technologies (https://www.uipath.com/resources/automation-analyst-reports/gartner-magic-quadrant-robotic-process-automation). The AI will be used in the form of AI agents striking up the orchestration in the bot development (Ai & Automation trends) |
| 4. | Evidence of Concurrence/Consultation with Line/State Departments (In case of regulated sectors): (Yes/No): Applied (under process)<br><br>If "No", why: |

# Section 5: Annexure & Supporting Documents Check List

*Specify Annexure Name / Supporting document file name*

| | | |
|---|---|---|
| 1. | **Annexure:** NCrF/NSQF level justification based on NCrF/NSQF descriptors *(Mandatory)* | Evidence of Level |
| 2. | **Annexure:** List of tools and equipment relevant for NOS *(Mandatory, except in case of online course)* | Tools and Equipment (lab set-up) |
| 3. | **Annexure:** Performance and Assessment Criteria *(Mandatory)* | Performance Criteria Details |
| 4. | **Annexure:** Assessment Strategy *(Mandatory)* | Assessment Strategy |
| 5. | **Annexure:** Blended Learning *(Mandatory, in case the selected Mode of delivery is Blended Learning)* | NA |
| 6. | **Annexure:** Acronym and Glossary *(Optional)* | Acronym and Glossary |
| 7. | **Annexure/Supporting Document:** Standalone NOS-Performance Criteria Details Annexure/Document with PC-wise detailing as per NOS format (Mandatory- Public view) | RPA Foundation |
| 8. | **Supporting Document:** Model Curriculum *(Mandatory – Public view)* | MC_RPA Foundation |

# Annexure: 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 | Outline the steps involved in designing an RPA solution.<br>Evaluate the objective and requirements of automating a given process.<br>Identify sub-tasks within the process that can be automated.<br>Create process workflow for a sample RPA solution.<br>Explain the purpose of the various documents related to the RPA solution (e.g., process design document, bot handover document, solution design document, etc.)<br>Explain the importance of exception handling and business continuity plans in process automation. | In learning the fundamentals of RPA, candidates learn the basic knowledge and skills that an individual must possess before they gain hands-on experience in automation design. | 4.5 |
| Professional and Technical Skills/ Expertise/ Professional Knowledge | Fundamentals of RPA<br>Understanding of RPA design processes<br>Understanding of RPA design automation flows<br>Understanding of RPA bots building | | 4.5 |

| 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 |
|---|---|---|---|
| | Understanding of deployment and controlling of bots | | |
| Employment Readiness & Entrepreneurship Skills & Mind-set/Professional Skill | Stages in RPA solution design<br>Requirements gathering<br>Identifying the sub-tasks in each process<br>Workflow design<br>Identifying suitable platforms/ tools for RPA<br>Error/ exception handling<br>Essential documents in RPA solution design (bot handover document, solution design document, etc.) | The role demands a skill set that allows the individual to use process assessment, automation design and bot-building skills. | 4.5 |
| Broad Learning Outcomes/Core Skill | Basic functionality available in popular RPA tools for bot development (recorder, variables, arguments, commands, actions, etc.)<br>Bot development<br>Reusability of modules<br>Common exceptions/ errors<br>Bot testing<br>Development best practices | The individual must apply the RPA skills along with a sound understanding of business use cases that can be automated. This would enable the candidate to understand RPA concepts better. | 4.5 |

| 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 |
|---|---|---|---|
| Responsibility | Development of knowledge, skills, and competencies<br><br>Build and maintain relationships with colleagues and other teams.<br><br>Convince others to take appropriate action in different situations.<br><br>Manage and collaborate with stakeholders for project success | The role demands to work in a team to empower a culture of safety, security, and compliance in all aspects of RPA | 4.5 |

# Annexure: Tools and Equipment (lab set-up)

List of Tools and Equipment

**Batch Size:**

| S. No. | Tool / Equipment Name | Specification | Quantity for specified Batch size |
|---|---|---|---|
| 1 | PC/Laptop with internet | - | 1 Unit per Trainee |
| 2 | RPA Software | OpenRPA,Ui path Community Edition | Installed/Access to each system |
| 3 | Programming Languages and & Libraries | Python &<br>TensorFlow library (Open-source ML framework developed by Google that can be used for creating complex models for automation tasks in areas like image recognition, natural language processing, and more) | Installed/Access to each system |
| 4 | Drawing Tools | Draw.io | Installed/Access to each system |

| | | | |
|---|---|---|---|
| 5 | Version Control Tools | Github | Installed/Access to each system |

Classroom Aids

The aids required to conduct sessions in the classroom are:

1. Presentation software like MS ppt for presentation
2. White Board
3. White Board Marker
4. Projector
5. Laptop/Computer

# Annexure: Industry Validations Summary

| S. No | Organization Name | Representative Name | Designation | Contact Address | Contact Phone No | E-mail ID | LinkedIn Profile *(if available)* |
|---|---|---|---|---|---|---|---|
| **S. No** | **Organization Name** | **Representative Name** | **Designation** | **Contact Address** | **Contact Phone No** | **E-mail ID** | **LinkedIn Profile** *(if available)* |
| 1 | Q Academy | Deepak Gour | Product and Academic Head | - | 9893554394 | deepak@qacademy.ca | https://ca.linkedin.com/in/deepak-gour-8853968 |
| 2 | Freelance SME (Ex-3i Infotech) | Rishi Agrawal | Ex-SVP and Global Delivery Head – Automations, Applications and Analytics | - | 7702191049 | agrishi@gmail.com | https://www.linkedin.com/in/agrishi |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 3 | Barq | Satheesh Sekar | Senior Decision Scientist | - | 9444218513 | satheeshk.sekar@gmail.com | https://www.linkedin.com/in/satheeshksekar/?originalSubdomain=in |
| 4 | Data Switch | Thilak hariharaSudhan A | Product Engineer | - | 6393798750 | thilakhariharan@gmail.com | https://www.linkedin.com/in/thilak-hariharasudhan-43a89b269/ |
| 5 | Delta Electronics India | Kabilan R D | Project Manager | - | 7010811080 | kabilanrdurai@outlook.com | https://www.linkedin.com/in/kabilan-r-d-b09856122 |
| 6 | Draup | MD Mahabub Alam | Software Architect | - | 9731517171 | mahabubalam@draup.com | https://www.linkedin.com/in/mdmahabubalam/?originalSubdomain=in |
| 7 | Engagely | Aniruthan.V | Senior software engineer | - | 8098978284 | Aniruthan.v@engagely.ai | https://www.linkedin.com/in/aniruthan-venkatavaradhan-79849b203/ |
| 8 | Accolite Digital | Ayushmaan Pandey | Senior Software Engineer | - | 8077386365 | ayushmaan.pandey@accolitedigital.com | https://www.linkedin.com/in/ayushmaanpandey |
| 9 | Frontier airlines | Santhosh kumar S | Software Engineer DevOps L1 | - | 9655747400 | santhoshselvaraj24031998@gmail.com | |
| 10 | IBM | Arpita Majumder | Tech Consultant | - | 7894369677 | Arpita.majumder@ibm.com | https://www.linkedin.com/in/arpita-majumder-85612a67/ |
| 11 | Impekable Australia | sreepathi.D | Lead Market Research and Business Development | - | 9655036999 | sanjeevsree22@gmail.com | https://in.linkedin.com/in/sreepathi-d-3391273a |
| 12 | Infosys | Vivek Pilaniya | Program Manager | - | 9718423687 | vivek.pilania@infosys.com | https://www.linkedin.com/in/vivekpilania-iimc/?originalSubdomain=in |
| 13 | Intellibren | Kailash PD | Director | - | 6374700185 | kailash@intellibren.com | - |
| 14 | Kwalee | Ravi Chaudhary | Software Engineering consultant | - | 8750108744 | ravi.chaudhary@kwalee.com | https://www.linkedin.com/in/ravi-xo/ |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 15 | Mindshare (Inclusive Minds) | Pamindar Singh | Team Lead | - | 8713901984 | paminder.singh@themindshare.in | https://www.linkedin.com/in/paminder-singh-7990b8101/ |
| 16 | Q Acadmey | Deepak Gour | Product and Academic Head | - | 9893554394 | deepak@qacademy.ca | https://ca.linkedin.com/in/deepak-gour-8853968 |
| 17 | SAP | Archana Murali G Vijay Rashmi Mavinakere | Development Manager - Content for Robotic Process | - | - | a.murali@sap.com<br>vijay.g@sap.com<br>rashmi.mavinakere@sap.com | - |
| 18 | Skillsda | Sankar Vijyan Dr. R Thirukumar Kottaram Ramesh | Head R&D Director-Engg. | - | 9500123029<br>9894801793 | thiru@skillsda.com<br>sv@skillsda.com<br>ram@skillsda.com | https://www.linkedin.com/in/kottaram-v-ramesh/<br>https://in.linkedin.com/in/dr-thirukkumaran-raman-1435a1216 |
| 19 | Volkswagen | Ranjithkumar. K | Sr.Test Analyst | - | 8838107162 | ranjikadri@gmail.com | https://in.linkedin.com/in/ranjithkumar-k-9b692a136 |
| 20 | Wipro | Abdul Rahim | Senior Associate | - | 7339471256 | Abdul.rahims@wipro.com | |
| 21 | Upgrad | Samneesh Sharma | Sr Manager-project delivery | - | 8679334000 | shamneesh.sharma@upgrad.com | https://www.linkedin.com/in/shamneeshsharma1987/ |

# Annexure: Training Details

**Training Projections:**

| Year | Estimated Training # of Total Candidates | Estimated training # of Women | Estimated training # of People with Disability |
|---|---|---|---|
| | | | |
| | | | |

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

# Annexure: 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/sites/default/files/Guidelines%20for%20Blended%20Learning%20for%20Vocational%20Education,%20Training%20&%20Skilling.pdf*

| S. No. | Select the Components of the NOS | List Recommended Tools – for all Selected Components | Offline: Online Ratio |
|---|---|---|---|
| 1 | ☐Theory/ Lectures - Imparting theoretical and conceptual knowledge | NA | NA |
| 2 | ☐Imparting Soft Skills, Life Skills and Employability Skills /Mentorship to Learners | NA | NA |
| 3 | ☐Showing Practical Demonstrations to the learners | NA | NA |
| 4 | ☐Imparting Practical Hands-on Skills/ Lab Work/ workshop/ shop floor training | NA | NA |
| 5 | ☐Tutorials/ Assignments/ Drill/ Practice | NA | NA |
| 6 | ☐Proctored Monitoring/ Assessment/ Evaluation/ Examinations | NA | NA |
| 7 | ☐On the Job Training (OJT)/ Project Work Internship/ Candidate Training | NA | NA |

# Annexure: Standalone NOS- Performance Criteria details

1. **Description:** This NOS describes the fundamentals of RPA

2. **Scope:**

The scope covers the following:

- RPA Fundamentals
- Process assessment,
- Solution Design
- Bot Development, Deployment & Administration,
- AI in RPA

## 3. Elements and Performance Criteria

### RPA Fundamentals

PC1. Define RPA, types, its life cycle, its types & evolution
PC2. Understand the benefits, risks & challenges of RPA
PC3. Differentiate traditional automation and RPA
PC4. Understand concept of process automation
PC5. Understand the business context of automation

### Process Assessment

PC6. Discuss & prioritize the organizational processes for RPA implementation for a sample industry based on feasibility analysis, project complexity and other relevant variables
PC7. Evaluate the objective and requirements of automating a given process
PC8. Outline the steps involved in designing a RPA solution for a selected organization process

### Solution Design

PC9. Identify sub-tasks within the process that can be automated.
PC10. Create process workflow for a sample RPA solution.

### Bot Development, Deployment & Administration

PC11. Develop a basic functional bot suitable for the selected organizational process.
PC12. Test the bot to ensure quality.
PC13. Outline the fundamental aspects of technical specification documents.
PC14. Understand the best practices in bot development.
PC15. Explain version control, bot scheduling, bot administration.
PC16. Demonstrate control room functionalities related to bot deployment and maintenance.

### AI in RPA

PC17. Understand the potential of integrating AI with RPA.

**4. Knowledge and Understanding (KU):**

KU1. Basic understanding of RPA technology and its role in business
KU2. Ability to evaluate business processes for automation readiness.
KU3. Clear understanding of automation technologies.
KU4. Understanding of business operations and strategic alignment.
KU5. Skills in process mapping and analysis.
KU6. Ability to set clear automation goals and objectives.
KU7. Familiarity with RPA tools and development methodologies.
KU8. Understanding of testing methodologies and quality assurance.
KU9.Familiarity with development best practices and standards.
KU10. Basic understanding of AI technologies and capabilities.

**5. Generic Skills (GS):**

GS1. Ability to identify issues and find effective solutions
GS2.Ability to manage multiple tasks and prioritize effectively
GS3. Work effectively with cross-functional teams.
GS4. Writing clear and concise technical documents that capture requirements and designs.
GS5. Prioritizing tasks and managing time effectively.

# Annexure: Assessment Criteria

Detailed PC-wise assessment criteria and assessment marks for the NOS are as follows:

| S. No. | Assessment Criteria for Performance Criteria | Theory Marks | Practical Marks | Project Marks | Viva Marks |
|---|---|---|---|---|---|

| | | | | | |
|---|---|---|---|---|---|
| PC 1. | Define RPA, types, its life cycle, its types & evolution | 1 | 3 | - | - |
| PC 2. | Understand the benefits, risks & challenges of RPA | 1 | 4 | - | - |
| PC 3. | Differentiate traditional automation and RPA | 1 | 4 | - | - |
| PC 4. | Understand concept of process automation | 1 | 4 | - | - |
| PC 5. | Understand the business context of automation | 2 | 4 | - | - |
| PC 6. | Discuss & prioritize the organizational processes for RPA implementation for a sample industry based on feasibilty analysis ,project complixty and other relevant variables | 2 | 4 | - | - |
| PC 7. | Evaluate the objective and requirements of automating a given process | 2 | 4 | - | - |
| PC 8. | Outline the steps involved in designing a RPA solution for a selected organization process | 2 | 4 | - | - |
| PC 9. | Identify sub-tasks within the process that can be automated | 2 | 4 | - | - |
| PC 10. | Create process workflow for a sample RPA solution | 2 | 4 | - | - |
| PC 11. | Develop a basic functional bot suitable for the selected organizational process | 2 | 4 | - | - |
| PC 12. | Test the bot to ensure quality | 2 | 4 | - | - |
| PC 13. | Outline the fundamental aspects of technical specification documents | 2 | 4 | - | - |
| PC 14. | Understand the best practices in bot development | 2 | 4 | - | - |
| PC 15. | Explain version control, bot scheduling, bot administration | 2 | 5 | - | - |
| PC 16. | Demonstrate control room functionalities related to bot deployment and maintenance | 2 | 5 | - | - |
| PC 17. | Understand the potential of integrating AI with RPA. | 2 | 5 | - | - |
| **Total Marks** | | **30** | **70** | **-** | **-** |

# Annexure: Assessment Strategy

**Assessment Process Overview**

**Batch Creation & Assessment Request:**

Training Providers (TP) or Training Centers (TC), including any other authorized partner of Ministry/ Department create batches / push batches on the SIDH portal. Assessment requests are submitted through the SIDH portal or via email or other media as authorized from time to time. For NON-SIDH schemes, assessment requests are received electronically or through respective State Skill Mission portals. TP/TC initiates the assessment request through the InSDMS portal and processes the payment (where applicable).

**Batch Alignment & Confirmation:**

Upon payment confirmation, batches are assigned to the Assessment Agency based on factors like:

- Assessment readiness
- Availability of certified assessors for the specific job role
- Assessment capping to an assessment agency as prescribed from time to time for an AB An email communication / prescribed mode communication is sent to TP/TC for confirmation of the assessment date, with IT-ITeS SSC in the loop. Once confirmation is received, the Assessment Agency designates a TOA-certified assessor to conduct or facilitate the assessment.
- Batches are only formed when the Qualification is active.

**Candidate Verification & Assessment Execution:**

Candidate details are verified and documented at the beginning of the assessment by a certified assessor. A Quality Assurance (QA) mechanism is enforced, requiring an undertaking from the TC. Regular feedback is collected from TP/TC to ensure continuous improvement.

**Evidence Collection & Validation:**

Proctors or assessors capture date/time-stamped and geo-tagged photographs of the assessment location during the process. Attendance is also ensured offline. A PC-wise result analysis is conducted to refine assessment standards.

**Monitoring & Compliance:**

Batch monitoring follows established protocols, ensuring adherence to assessment guidelines. Sample based surprise visits are conducted at TC locations during both training and assessments to verify compliance. This structured approach ensures transparency, quality control, and validation throughout the assessment process.

**Testing Environment:**

- Check the Assessment location, date and time
- If the batch size is more than 30, then there should be 2 Assessors.
- Check that the allotted time to the candidates to complete Theory & Practical Assessment is correct.

**Assessment Quality Assurance levels/Framework:**

IT-ITeS SSC nasscom is responsible for the development and periodic review of the question bank developed for a specific job role. We publish an openly accessible sample /model question paper on our website for all stakeholders. The quality of the Question Bank created by the assessment designer is validated by a Subject matter experts on the following parameters:

- Appropriateness of the Question Bank in terms of facts, data and information.
- Checks for grammar, spellings, scripting and formatting.
- The information provided should be specific enough to remove any ambiguity in answers/solutions to the question.
- Relevance – Assessing the topic well w.r.t. the job role.
- Check if the difficulty level of each question is as per the matrix.
- Check if the images used in the question are clear and relevant.
- All variables, symbols and abbreviations used must be declared.
- The correct answer option should be unique, and the options should not be overlapping

# Annexure: Acronym and Glossary

## Acronym

| Acronym | Description |
|---|---|
| **AA** | Assessment Agency |
| **AB** | Awarding Body |
| **NCrF** | National Credit Framework |
| **NOS** | National Occupational Standard(s) |
| **NQR** | National Qualification Register |
| **NSQF** | National Skills Qualifications Framework |

## Glossary

| Term | Description |
|---|---|
| **RPA** | Robotic process Automation |
| **National Occupational Standards (NOS)** | 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. |
| **Qualification** | 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 |
| **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. |