

QUALIFICATION FILE

Airline First Officer – Ground Level

- ☐ Short Term Training (STT) ☒ Long Term Training (LTT) ☐ Apprenticeship
- ☒ Upskilling ☐ Dual/Flexi Qualification ☐ For ToT ☐ For ToA
- ☒ General ☐ Multi-skill (MS) ☐ Cross Sectoral (CS) ☐ Future Skills ☐ OEM

NCrF/NSQF Level: 5

Submitted By:

Aerospace and Aviation Sector skill Council

AASSC, C/o Dynamatic Manufacturing Ltd,

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Peenya Industrial Area, Bengaluru- 560058

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Section 1: Basic Details

1.	Qualification Name	Airline First Officer – Ground Level													
2.	Sector/s	Airline Operations													
3.	Type of Qualification: ☒ New ☐ Revised ☐ Has Electives/Options ☐ OEM	NQR Code & version of existing/previous qualification: Version:1.0 Airline First Officer	Qualification Name of existing/previous version: Airline First Officer												
4.	a. OEM Name b. Qualification Name (Wherever applicable)	b. Airline First Officer – Ground Level													
5.	National Qualification Register (NQR) Code &Version (Will be issued after NSQC approval)	QG-05-AA-04186-2025-V1-AASSC	6. NCrf/NSQF Level: 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	The Airline First Officer assists the captain in operating the aircraft safely and efficiently, handling pre-flight planning, in-flight monitoring, and post-flight checks. They manage cockpit systems, support navigation, and ensure compliance with safety protocols. This role requires strong technical knowledge, teamwork, and quick decision-making skills.													
9.	Eligibility Criteria for Entry for Student/Trainee/Learner/Employee	a. Entry Qualification & Relevant Experience: <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>UG /Diploma In relevant Field</td> <td>-</td> </tr> <tr> <td>2</td> <td>12th Grade Pass /Equivalent</td> <td>1.5 Experience in relevant field -</td> </tr> <tr> <td>3</td> <td>Previous relevant qualification of NSQF Level 4 with minimum 3 Years Experience.</td> <td>-</td> </tr> </tbody> </table> b. Age:18		S. No.	Academic/Skill Qualification (with Specialization - if applicable)	Required Experience (with Specialization - if applicable)	1	UG /Diploma In relevant Field	-	2	12th Grade Pass /Equivalent	1.5 Experience in relevant field -	3	Previous relevant qualification of NSQF Level 4 with minimum 3 Years Experience.	-
S. No.	Academic/Skill Qualification (with Specialization - if applicable)	Required Experience (with Specialization - if applicable)													
1	UG /Diploma In relevant Field	-													
2	12th Grade Pass /Equivalent	1.5 Experience in relevant field -													
3	Previous relevant qualification of NSQF Level 4 with minimum 3 Years Experience.	-													
10.	Credits Assigned to this Qualification, Subject to Assessment (as per National Credit Framework (NCrF))	72	11. Common Cost Norm Category (I/II/III) (wherever applicable): I												
12.	Any Licensing requirements for Undertaking Training on This Qualification (wherever applicable)	NIL													

13.	Training Duration by Modes of Training Delivery (<i>Specify Total Duration as per selected training delivery modes and as per requirement of the qualification</i>)	☒ Offline ☐ Online ☐ Blended <table border="1" data-bbox="952 167 2049 343"> <thead> <tr> <th>Training Delivery Modes</th> <th>Theory (Hours)</th> <th>Practical (Hours)</th> <th>OJT Mandatory (Hours)</th> <th>OJT Recommended (Hours)</th> <th>Total (Hours)</th> </tr> </thead> <tbody> <tr> <td>Classroom (offline)</td> <td>880:00</td> <td>1060:00</td> <td>160:00</td> <td>00:00</td> <td>2160:00</td> </tr> <tr> <td>Online</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table> <i>(Refer Blended Learning Annexure for details)</i>					Training Delivery Modes	Theory (Hours)	Practical (Hours)	OJT Mandatory (Hours)	OJT Recommended (Hours)	Total (Hours)	Classroom (offline)	880:00	1060:00	160:00	00:00	2160:00	Online					
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Classroom (offline)	880:00	1060:00	160:00	00:00	2160:00																			
Online																								
14.	Aligned to NCO/ISCO Code/s (<i>if no code is available mention the same</i>)	NCO-2015/3153.9900																						
15.	Progression path after attaining the qualification (<i>Please show Professional and Academic progression</i>)	Airline First Officer – Ground Level, Cadet First Officer																						
16.	Other Indian languages in which the Qualification & Model Curriculum are being submitted	nil																						
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																						
19.	How Participation of Women will be Encouraged	If “Yes”, specify applicable type of Disability:																						
20.	Are Greening/ Environment Sustainability Aspects Covered (<i>Specify the NOS/Module which covers it</i>)	Women are encouraged to become Airline First Officers through mentorship programs, scholarships, and diversity-focused recruitment initiatives. Airlines promote female role models and foster supportive environments to ensure equal opportunities. These efforts help break gender barriers and inspire more women to pursue aviation careers.																						
21.	Is Qualification Suitable to be Offered in Schools/Colleges	☐ Yes ☒ No ☐ No ☒ Yes ☐ No																						
22.	Name and Contact Details of Submitting / Awarding Body SPOC (<i>In case of CS or MS, provide details of both Lead AB & Supporting ABs</i>)	Name: Aerospace and Aviation Sector Skill Council Email: touchdown@aassc.in Contact No.: 080-28398506 Website: https://www.aassc.in/																						
23.	Final Approval Date by NSQC: 08-05-2025	24. Validity Duration: 03 Years			25. Next Review Date: 08-05-2028																			

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.	Perform Pre-flight tasks of Pilot	AAS/N0612 NOS Version No. – 1.0	Core	5	7	85:00	105:00	20:00	00:00	210:00	56	44	-	-	100	10
2.	Air Navigation and Aviation Meteorology	AAS/N0636 NOS Version No. – 1.0	Core	5	7	85:00	105:00	20:00	00:00	210:00	45	55	-	-	100	10
3.	undertake Flight Operations	AAS/N0613 NOS Version No. – 1.0	Core	5	7	85:00	105:00	20:00	00:00	210:00	48	52	-	-	100	10
4.	Perform Post-flight Tasks	AAS/N0614 NOS Version No. – 1.0	Core	5	7	85:00	105:00	20:00	00:00	210:00	49	51	-	-	100	10
5.	Aircraft Systems and Performance	AAS/N0637 NOS Version No. – 1.0	Core	5	7	85:00	105:00	20:00	00:00	210:00	49	51	-	-	100	10
6.	Multi-Crew Coordination (MCC)	AAS/N0638 NOS Version No. – 1.0	Core	5	7	85:00	105:00	20:00	00:00	210:00	45	55	-	-	100	10
7.	Air Regulations and Aviation Law	AAS/N0639 NOS Version No. – 1.0	Core	5	6	90:00	90:00	00:00	00:00	180:00	45	55	-	-	100	5

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)
8.	Radio Telephony & Communication (VFR/IFR)	AAS/N0640 NOS Version No. – 1.0	core	5	7	85:00	105:00	20:00	00:00	210:00	44	56	-	-	100	10
9.	Technical Liaising with ATC	AAS/N0641 NOS Version No. – 1.0	Core	5	7	85:00	105:00	20:00	00:00	210:00	45	55	-	-	100	10
10.	Troubleshooting and System Monitoring	AAS/N0642 NOS Version No. – 1.0	Core	5	6	75:00	95:00	10:00	00:00	180:00	48	52	-	-	100	5
11.	Follow safety and security procedures	AAS/N0502 NOS Version No. – 1.0	core	5	2	30:00	30:00	00:00	00:00	60:00	52	48	-	-	100	5
12.	Employability skills	DGT/VSQ/N0102-NOS Version No. – 1.0	Non-core	5	2	30:00	30:00	00:00	00:00	60:00	20	30	-	-	50	5
Duration (in Hours) / Total Marks					72	880:00	1060:00	160:00	00:00	2160:00	546	604	-	-	1150	100

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)
1.																
2.																
Duration (in Hours) / Total Marks																

Optional NOS/s:

S. No	NOS/Module Name	NOS/Module Code & Version (if applicable)	Core/ Non-Core	NCrF/NS QF Level	Credits as per NCrF	Training Duration (Hours)					Assessment Marks				
						Th.	Pr.	OJT-Man.	OJT-Rec.	Total	Th.	Pr.	Proj.	Viva	Weightage (%) (if applicable)
1.															
2.															
Duration (in Hours) / Total Marks															

Assessment - Minimum Qualifying Percentage

Please specify **any one** of the following:

Minimum Pass Percentage – Aggregate at qualification level: 70 % (Every Trainee should score specified minimum aggregate passing percentage at qualification level to successfully clear the assessment.)

Section 3: Training Related

1.	Trainer's Qualification and experience in the relevant sector (in years) (as per NCVET guidelines)	Graduate in class 12 th science and math's with 2-3 years of experience in relevant job role
2.	Master Trainer's Qualification and experience in the relevant sector (in years) (as per NCVET guidelines)	Graduate in class 12 th science and math's with 5-10 years of experience in relevant job role
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	

Section 4: Assessment Related

1.	Assessor's Qualification and experience in relevant sector (in years) (as per NCVET guidelines)	Graduate in class 12 th science and math's with 2-3 years of experience in relevant job role
2.	Proctor's Qualification and experience in relevant sector (in years) (as per NCVET guidelines)	Graduate with 2-3 years of experience in relevant job role

3.	Lead Assessor's/Proctor's Qualification and experience in relevant sector (in years) <i>(as per NCVET guidelines)</i>	Graduate in class 12 th science and math's with 5-10 years of experience in relevant job role
4.	Assessment Mode <i>(Specify the assessment mode)</i>	offline
5.	Tools and Equipment Required for Assessment	☒ Same as for training ☐ Yes ☐ No <i>(details to be provided in Annexure-if it is different for Assessment)</i>

Section 5: Evidence of the need for the Qualification

Provide Annexure/Supporting documents name.

1.	Latest Skill Gap Study (not older than 2 years) (Yes/No): No
2.	Latest Market Research Reports or any other source (not older than 2 years) (Yes/No): Yes
3.	Government /Industry initiatives/ requirement (Yes/No): Yes
4.	Number of Industry validation provided: 10
5.	Estimated nos. of persons to be trained and employed: 3000
6.	Evidence of Concurrence/Consultation with Line Ministry/State Departments: Yes

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 <i>(Mandatory)</i>	Attached
2.	Annexure: List of tools and equipment relevant for qualification <i>(Mandatory, except in case of online course)</i>	Attached
3.	Annexure: Detailed Assessment Criteria <i>(Mandatory)</i>	Attached
4.	Annexure: Assessment Strategy <i>(Mandatory)</i>	Attached
5.	Annexure: Blended Learning <i>(Mandatory, in case selected Mode of delivery is "Blended Learning")</i>	Nil
6.	Annexure: Multiple Entry-Exit Details <i>(Mandatory, in case qualification has multiple Entry-Exit)</i>	Nil
7.	Annexure: Acronym and Glossary <i>(Optional)</i>	Attached
8.	Supporting Document: Model Curriculum <i>(Mandatory – Public view)</i>	Attached

9.	Supporting Document: Career Progression (Mandatory - Public view)	Attached
10.	Supporting Document: Occupational Map (Mandatory)	Attached
11.	Supporting Document: Assessment SOP (Mandatory)	Attached
12.	Any other document you wish to submit:	

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	Airline pilots fly passengers and/or cargo on long or short-haul flights for leisure, business or commercial purposes. The aircraft is typically operated by two pilots; one will be the captain who is the pilot in command, while the other will be the supporting first officer. The job of a pilot comes with heavy responsibility and personal commitment.	The job holder is responsible fly passengers and/or cargo on long or short-haul flights for leisure, business or commercial purposes. The aircraft is typically operated by two pilots; one will be the captain who is the pilot in command, while the other will be the supporting first officer. The job of a pilot comes with heavy responsibility and personal commitment. Hence, it qualifies as a Level 6 Role. As the job role holder is expected to work in a responsible and committed manner for ex., Flying the passengers or the cargo the job role cannot be pegged at level 5.	5
Professional and Technical Skills/ Expertise/ Professional Knowledge	The user/individual on the job needs to know and understand how to: different types of breaches of safety and security and how and when to report these, evacuation procedures for workers and passengers, how to summon medical assistance and the emergency services, where necessary, how to use the health, safety and accident reporting procedures and the importance of these, regulatory guidelines on dealing with safety and security emergencies, different visual defects that can be	The job holder is expected to have factual knowledge of the field of first officer. For ex: The job holder is expected to have knowledge of different types of breaches of safety and security and how and when to report these, evacuation procedures for workers and passengers, how to summon medical assistance and the emergency services, where necessary, how to use the health, safety and accident reporting procedures and the importance of these, regulatory guidelines on dealing with safety and security emergencies,	5

	observed on an aircraft, how to troubleshoot the maintenance messages from the aircraft , computer ,how to summon medical assistance and the emergency services, where necessary ,how to use the health, safety and accident reporting procedures and the importance of these, regulatory guidelines on dealing with safety and security emergencies, . how to ascertain if the aircraft is safe to operate the given flight, how to pilot the aircraft, different types of breaches of safety and security and how and when to report these, how to summon medical assistance and the emergency services, where necessary, how to use the health, safety and accident reporting procedures and the importance of these, regulatory guidelines on dealing with safety and security emergencies	differentvisual defects that can be observed on an aircraft, how to troubleshoot the maintenance messages from the aircraft , computer ,how to summon medical assistance and the emergency services, where necessary ,how to use the health, safety and accident reporting procedures and the importance of these, regulatory guidelines on dealing with safety and security emergencies, how to ascertain if the aircraft is safe to operate the given flight, how to pilot the aircraft, different types of breaches of safety and security and how and when to report these, how to summon medical assistance and the emergency services, where necessary, how to use the health, safety and accident reporting procedures and the importance of these, regulatory guidelines on dealing with safety and security emergencies etc., Since all the above-mentioned areas are related to factual knowledge in the field of knowledge, the role qualifies for Level 6. As the job holder requires factual knowledge of knowledge or study. For ex: the job holder is expected to know how to ascertain if the aircraft is safe to operate the given flight, how to pilot the aircraft, different types of breaches of safety and security and how and when to report these, how to summon medical assistance and the emergency services, where necessary, how to use the health, safety and accident reporting procedures and the importance of these, regulatory guidelines on dealing with safety and security emergencies etc.	
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Employment Readiness & Entrepreneurship Skills & Mind-set/Professional Skill	The user/individual on the job needs to know and understand how to: make decisions on a suitable course of action or response if permitted by the authority matrix, monitor efficient functioning of all activities, plan and organise work to achieve targets and deadlines, communicate with passengers and stakeholders in a courteous manner, maintain cordial work relationship, identify trends/common causes for errors and suggest possible solutions to the supervisor / management, identify and correct errors, analyse best possible solutions (cost, time, effort, etc.) suited for operations, concentrate on task at hand and complete it without errors, apply balanced judgments to different situations	The job holder is expected to carry out responsible and committed actions. For instance, the job holder make decisions on a suitable course of action or response if permitted by the authority matrix, monitor efficient functioning of all activities, plan and organise work to achieve targets and deadlines, communicate with passengers and stakeholders in a courteous manner, maintain cordial work relationship, identify trends/common causes for errors and suggest possible solutions to the supervisor / management, identify and correct errors, analyse best possible solutions (cost, time, effort, etc.) suited for operations, concentrate on task at hand and complete it without errors, apply balanced judgments to different situations., All these activities have a range of application with responsibility and commitment, hence qualifying the role for a Level 6. As the job requires to be responsible and use practical skill, appropriate rule and tool, using various media to communicate. For ex: communicate with passengers and stakeholders in a courteous manner, maintain cordial work relationship, identify trends/common causes for errors and suggest possible solutions to the supervisor / management, identify and correct errors, analyse best possible solutions (cost, time, effort, etc.) suited for operations, concentrate on task at hand and complete it without errors, apply balanced judgments to different situations etc., Therefore , it cannot be pegged at level 7.	5
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Broad Learning Outcomes/Core Skill	The user/ individual on the job needs to know and understand how to: complete accurately well written report in English language detailing the situations of emergency with attention to detail, read instructions/guidelines/procedures/rules, listen to and orally communicate information with all concerned	The job holder is expected to complete accurately well written report in English language detailing the situations of emergency with attention to detail, read instructions/guidelines/procedures/rules, listen to and orally communicate information with all concerned. Hence, this role qualifies for Level 6. As the job requires accurately well written report in English language detailing the situations of emergency with attention to detail, read instructions/guidelines/procedures/rules, listen to and orally communicate information with all concerned. Therefore, it cannot be pegged at level 5.	5
Responsibility	The Airline First Officer is responsible for: • Pre-flight tasks • Undertake Flight operations • Perform post-Flight tasks • Air navigation and aviation meteorology • Aircraft systems and performance • Multi-crew co-ordination (MCC) • Air regulations and flight rules • Radio telephony and communication (VFR/IFR) • Technical liaising with ATC • System monitoring and troubleshooting • Follow safety and security procedures • Employability skills	The job holder is responsible for only own work and learning. S/he is a skilled worker who carries out work activities with responsibility, Follow safety and security procedures, Pre-flight tasks, Flight operations, post-Flight tasks. Hence, this role qualifies for Level 6. As this job is about being responsible for ex: He/she is expected to have responsibility safety and security procedures, Pre-flight tasks, Flight operations etc., Therefore it cannot be pegged at level 5	5

Annexure: Tools and Equipment (Lab Set-Up)

List of Tools and Equipment

Batch Size: 30

S. No.	Tool / Equipment Name	Specification	Quantity for specified Batch size
1	Black/White Board & Markers		1
2	PC based projection system		1
3	Computer aided instructional packages (video films/software)		1
4	Concerned wall charts		1
5	Flight Simulator (type rated)		1
6	Tablets with cockpit linked flight information system software		30
7	Cockpit display simulator		1
8	Radio sets		5
9	First aid kit		3
10	Basic fire safety aids		1

Classroom Aids

The aids required to conduct sessions in the classroom are:

1. White/Black, board, Markers, computer and projector, trainer's guide, student handbook

Annexure: 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.	Jet Wings Airways	Aditya Singh	CEO	GUWAHATI, Kamrup Metropolitan, Assam, 781007	9954004007	ceo@jetwingsairways.com	
2	Orient Flights	Abel Abraham Math	Dy.CFI/ CGI	Mysore Airport - Hangar 3,	7989159003	dycfi@orientflights.com	
3	Red bird Flight Training	Shelka Gupta	Head PR&Business	Delhi	9899897658	Shelka.gupta@redbirdaviation.com	
4	Fly Lotus	Pankaj Tiwari	Asst General Manager	Delhi	9953683886	agm@flylotus.aero	

Annexure: 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
2025	1000					
2026	1000					
2027	1000					

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
2	2022	1310	900	840									

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. NSDC

Content availability for previous versions of qualifications:

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

Languages in which Content is available:

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 Qualification	List Recommended Tools – for all Selected Components	Offline : Online Ratio
1	☐ Theory/ Lectures - Imparting theoretical and conceptual knowledge		
2	☐ Imparting Soft Skills, Life Skills, and Employability Skills /Mentorship to Learners		
3	☐ Showing Practical Demonstrations to the learners		
4	☐ Imparting Practical Hands-on Skills/ Lab Work/ workshop/ shop floor training		
5	☐ Tutorials/ Assignments/ Drill/ Practice		
6	☐ Proctored Monitoring/ Assessment/ Evaluation/ Examinations		
7	☐ On the Job Training (OJT)/ Project Work Internship/ Apprenticeship Training		

Annexure: 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	Project Marks	Viva Marks
AAS/N0612: Perform Pre-flight tasks of Pilot	<i>Perform pre-flight checks</i>	24	20	-	-
	PC1. perform visual check of the external of the aircraft in accordance with organisation procedures, aircraft manufacturer procedures and recommendations and regulatory procedures	4	4	-	-
	PC2. perform cabin inspection and ensure all required documentations are updated and available in the cabin (according to company policy and regulatory requirements)	4	3	-	-

	PC3. communicate with the engineers on ground and check for any maintenance logs which can impact the aircraft operations	4	3	-	-
	PC4. ensure if any Minimum Equipment Lists (MEL's) required are in place and appropriate action for the MEL has been factored in during flight operations	4	4	-	-
	PC5. assist the commander as requested	4	3	-	-
	PC6. carry out pre-flight checks of instruments, engines, fuel and safety systems	4	3	-	-
	<i>Prepare flight plan</i>	28	21	-	-
	PC7. gather and interpret all the required data about weather from MET and ground crew	4	3	-	-
	PC8. gather and interpret all the required data from ATC regarding the route to be followed during the flight	4	3	-	-
	PC9. calculate the fuel required for the flight	4	3	-	-
	PC10. provide necessary instructions for fueling of the aircraft in lines with the calculated fuel	4	3	-	-
	PC11. prepare the flight plan	4	3	-	-
	PC12. assist the commander as required	4	3	-	-
	PC13. provide information to ATC as a when required	4	3	-	-
	<i>Provide pre-flight briefing</i>	4	3	-	-
	PC14. provide a preflight briefing to the cabin crew with details of the flight	4	3	-	-
	Total Marks	56	44		
AAS/N0636: Air Navigation and Aviation Meteorology	<i>Apply Principles of Air Navigation</i>	18	24	-	-
	PC1. Interpret different types of aeronautical charts (e.g., enroute charts, approach charts)	3	4	-	-
	PC2. Identify and use navigation aids such as VOR, NDB, ADF, DME, and GPS	3	4	-	-
	PC3. Understand weather patterns, cloud formations, visibility, turbulence, and icing	3	4	-	-
	PC4. Understand and apply the principles of dead reckoning and radio navigation	3	4	-	-
	PC5. Determine position using radar, GNSS, and other navigation systems	3	4	-	-
	PC6. Identify airspace structures, restrictions, and regulations	3	4	-	-
	<i>Interpret Meteorological Data</i>	15	15	-	-
	PC7. Read and interpret aviation weather reports and forecasts (METAR, TAF, SIGMET, AIRMET)	3	3	-	-
	PC8. Analyze upper wind charts, surface analysis charts, and prognostic charts	3	3	-	-
	PC9. Understand weather patterns, cloud formations, visibility, turbulence, and icing conditions	3	3	-	-

	PC10. Correlate meteorological information with route planning and aircraft performance	3	3	-	-
	PC11. Identify hazardous weather conditions that may affect flight operations	3	3	-	-
	<i>Integrate Navigation and Meteorology into Flight Planning</i>	12	16	-	-
	PC12. Integrate wind and weather data to adjust flight path and fuel calculation	3	4	-	-
	PC13. Liaise with ATC and meteorological units for real-time updates	3	4	-	-
	PC14. Update the commander on any weather-related advisories or route deviations	3	4	-	-
	PC15. Ensure compliance with safety margins based on navigational and meteorological inputs	3	4	-	-
	Total Marks	45	55		
AAS/N0613: undertake Flight Operations	<i>Undertake flight operations</i>	48	52	-	-
	PC1. liaise with ATC for take-off clearance and route confirmation	6	6	-	-
	PC2. pilot the aircraft for safe operations through take off - climb - cruise - descent and landing phase of the flight	6	7	-	-
	PC3. continuously monitor the aircraft system during the flight	6	7	-	-
	PC4. undertake troubleshooting as and when required	6	7	-	-
	PC5. continuously monitor air traffic in visual range, aircraft position and weather updates en-route the flight	6	7	-	-
	PC6. undertake announcements to the passengers as and when required	6	6	-	-
	PC7. communicate with cabin crew to provide necessary information or gather updates as and when required	6	6	-	-
	PC8. perform any other function as requested by the commander of the flight	6	6	-	-
	Total Marks	48	52		
AAS/N0614: Perform Post-flight Tasks	<i>Post flight tasks</i>	49	51	-	-
	PC1. communicate with the ground staff to update the nature of flight undertaken	7	8	-	-
	PC2. provide additional information as deemed necessary to the engineering team on any of the maintenance related events during the flight	7	8	-	-
	PC3. perform a debriefing session with the cabin crew	7	7	-	-
	PC4. provide inputs to the flight dispatch team on any visual weather conditions or air traffic as noticed during the flight	7	7	-	-
	PC5. update the pilot report for the flight	7	7	-	-
	PC6. undertake announcements to the passengers as and when required	7	7	-	-
	PC7. perform any other function as requested by the commander of the flight	7	7	-	-
	Total Marks	49	51		

AAS/N0637: Aircraft Systems and Performance	<i>Monitor aircraft systems</i>	28	28	-	-
	PC1. Monitor and interpret aircraft instruments and gauges	4	4	-	-
	PC2. Monitor the aircraft systems (electrical, hydraulic, pneumatic, etc.) as per procedure	4	4	-	-
	PC3. Identify and respond to warning signs and alerts from systems	4	4	-	-
	PC4. Communicate and coordinate with the commander and cabin crew for any abnormalities	4	4	-	-
	PC5. Respond to system failures as per standard operating procedures (SOPs)	4	4	-	-
	PC6. Log any relevant system malfunctions or deviations and report them as per norms	4	4	-	-
	PC7. Assist in in-flight troubleshooting of system alerts/faults	4	4	-	-
	<i>Understand aircraft performance parameters</i>	21	23	-	-
	PC8. Read and interpret aircraft performance charts	3	3	-	-
	PC9. Calculate take-off and landing distances as per current conditions	3	3	-	-
	PC10. Determine aircraft weight and balance limitations	3	3	-	-
	PC11. Apply performance-related information during various phases of flight	3	3	-	-
	PC12. Communicate any performance-related limitations to the commander	3	3	-	-
	PC13. Cross-check fuel consumption, endurance, and range	3	4	-	-
	PC14. Comply with performance-related regulatory norms	3	4	-	-
	Total Marks	49	51		
	<i>Communication:</i>	9	12	-	-
	PC1. Utilize clear, concise, and effective verbal and non-verbal communication to ensure mutual understanding among crew members	3	4	-	-
	PC2. Employ standard aviation phraseology and terminology to prevent misunderstandings	3	4	-	-
	PC3. Actively listen and provide timely feedback to confirm message reception and comprehension.	3	4	-	-
	<i>Leadership and Teamwork</i>	9	12	-	-
	PC4. Demonstrate leadership by providing clear direction, making informed decisions, and assuming responsibility when necessary.	3	4	-	-
	PC5. Foster a cooperative and respectful team environment, encouraging input and collaboration from all crew members.	3	4	-	-
	PC6. Effectively delegate tasks and monitor their completion to maintain operational efficiency.	3	4	-	-

AAS/N0638: Multi-Crew Coordination (MCC)	<i>Situational Awareness:</i>	9	12	-	-
	PC7. Maintain an accurate understanding of the aircraft's status, flight parameters, and surrounding environment.	3	4	-	-
	PC8. Anticipate potential threats and changes in the flight environment to enable proactive decision-making.	3	4	-	-
	PC9. Continuously update mental models based on new information and observations.	3	4	-	-
	<i>Workload Management:</i>	9	10	-	-
	PC10. Prioritize tasks effectively, especially during high-demand phases of flight, to prevent task saturation.	3	4	-	-
	PC11. Distribute workload appropriately among crew members to optimize performance and reduce stress.	3	3	-	-
	PC12. Recognize signs of overload in oneself and others and take corrective actions as needed.	3	3	-	-
	<i>Problem Solving and Decision Making:</i>	9	9	-	-
	PC13. Apply structured approaches to assess situations, identify problems, and develop viable solutions.	3	3	-	-
	PC14. Evaluate potential risks, benefits, and consequences of decisions within the operational context.	3	3	-	-
	PC15. Collaborate with crew members to reach consensus and implement effective solutions.	3	3	-	-
	Total Marks	45	55		
AAS/N0639: Air Regulations and Aviation Law	<i>Comprehend International Aviation Conventions</i>	9	12	-	-
	PC1. Explain the principles and provisions of key international aviation conventions, such as the Chicago Convention.	3	4	-	-
	PC2. Describe the role and functions of the International Civil Aviation Organization (ICAO) in global aviation regulation.	3	4	-	-
	PC3. Interpret how international agreements influence national aviation laws and operations.	3	4	-	-
	<i>Understand National Aviation Regulations</i>	9	12	-	-
	PC4: Identify the national regulatory bodies responsible for civil aviation oversight.	3	4	-	-
	PC5: Summarize the key regulations and standards set forth by national aviation authorities.	3	4	-	-
	PC6: Ensure operational compliance with national aviation laws and procedures.	3	4	-	-

	<i>Recognize Airspace Sovereignty and Usage</i>	9	12	-	-
	PC7: Define the concept of airspace sovereignty and its implications for flight operations.	3	4	-	-
	PC8: Explain the classification of airspace and the rules governing each category.	3	4	-	-
	PC9: Navigate the airspace in accordance with international and national regulations.	3	4	-	-
	<i>Adherent to Safety and Maintenance Standards</i>	9	10	-	-
	PC10: Outline the safety protocols mandated by aircraft operation and maintenance.	3	4	-	-
	PC11: Implement procedures to ensure compliance with safety standards during flight operations.	3	3	-	-
	PC12: Report and address safety violations in line with regulatory requirements.	3	3	-	-
	<i>Understand Liability, Insurance, and Passenger Rights</i>	9	9	-	-
	PC13: Explain the legal liabilities of air carriers in the event of accidents or incidents	3	3	-	-
	PC14: Describe the insurance requirements for commercial aviation operations.	3	3	-	-
	PC15: Advocate for passenger rights as stipulated in aviation law.	3	3	-	-
	Total Marks	45	55		
AAS/N0640: Radio Telephony & Communication (VFR/IFR)	<i>Utilize Standard Radio Phraseology</i>	8	10	-	-
	PC1: Employ standard phraseology as specified in the Aeronautical Information Manual (AIM) and Pilot/Controller Glossary to ensure clear and concise communication.	4	5	-	-
	PC2: Avoid the use of jargon, slang, or non-standard terms during radio transmissions to prevent misunderstandings.	4	5	-	-
	<i>Operate Communication Equipment Effectively</i>	8	10	-	-
	PC3: Select and tune appropriate communication frequencies for different phases of flight, including departure, en-route, and arrival.	4	5	-	-
	PC4: Conduct radio checks to confirm the serviceability of communication equipment before and during flights.	4	5	-	-
	<i>Manage Communications During Normal and Emergency Situations</i>	12	15	-	-

	PC5: Maintain vigilance in monitoring ATC communications for potential traffic conflicts, especially when operating on active runways or during final approach.	4	5	-	-
	PC6: Recognize and respond appropriately to ATC light signals in the event of radio communication failure.	4	5	-	-
	PC7: Implement standard procedures for lost communication scenarios, including route and altitude adherence as per regulatory guidelines	4	5	-	-
	<i>Coordination with Air Traffic Control (ATC)</i>	8	10	-	-
	PC8: Establish and maintain two-way communication with the appropriate ATC facility, providing necessary information such as aircraft identification, position, and intentions.	4	5	-	-
	PC9: Acknowledge and comply promptly with ATC instructions and clearances to ensure safe and efficient flight operations.	4	5	-	-
	<i>Comply with Communication Protocols for VFR and IFR Operations</i>	8	11	-	-
	PC10: Differentiate between communication procedures specific to VFR and IFR operations, including departure information and in-flight reporting requirements.	4	5	-	-
	PC11: Provide position reports and flight progress updates as required under VFR and IFR, ensuring adherence to ATC expectations and airspace regulations	4	6	-	-
	Total Marks	44	56		
AAS/N0641: Technical Liaising with ATC	<i>Establish and Maintain Communication with ATC</i>	9	11	-	-
	PC1: Initiate contact with the appropriate ATC facility using standard communication protocols.	5	6	-	-
	PC2: Maintain continuous and clear communication with ATC throughout all phases of flight.	4	5	-	-
	<i>Understand and comply with ATC Instructions</i>	9	11	-	-
	PC3: Accurately interpret ATC instructions and clearances.	5	6	-	-
	PC4: Execute ATC directives promptly and report back upon completion.	4	5	-	-
	<i>Coordinate Flight Plans and Clearances</i>	9	11	-	-
	PC5: Submit and confirm flight plans with ATC prior to departure.	5	6	-	-
	PC6: Obtain necessary clearances for route, altitude, and any deviations.	4	5	-	-
	<i>Manage In-flight Changes and Emergencies</i>	9	11	-	-
	PC07: Communicate any deviations from the flight plan to ATC, including changes due to weather or technical issues.	5	6	-	-
	PC08: Inform ATC immediately in case of emergencies and follow their instructions for resolution	4	5	-	-

	<i>Utilize Standard Phraseology and Protocols</i>	9	11	-	-
	PC09: Use standard aviation phraseology to prevent misunderstandings.	5	6	-	-
	PC10: Adhere to established communication protocols to ensure clarity and brevity. ATC expectations and airspace regulations	4	5	-	-
	Total Marks	45	55		
AAS/N0642: Troubleshooting and System Monitoring	<i>Monitor Aircraft Systems and Performance</i>	10	10	-	-
	PC1: Continuously observe and assess aircraft systems, including engines, electrical, hydraulic, and avionics, to ensure they operate within normal parameters.	5	5	-	-
	PC2: Utilize flight instruments and onboard monitoring systems to track performance metrics such as air speed, altitude, fuel flow, and engine parameters.	5	5	-	-
	<i>Identify and Diagnose System Anomalies</i>	10	10	-	-
	PC3: Recognize deviations from standard operating parameters and promptly identify potential system malfunctions or failures.	5	5	-	-
	PC4: Analyze warning messages, alerts, and instrument readings to diagnose the nature and severity of system issues.	5	5	-	-
	<i>Implement Corrective Actions for System Malfunctions</i>	10	10	-	-
	PC5: Follow established procedures and checklists to address and rectify identified system anomalies or failures.	5	5	-	-
	PC6: Communicate effectively with the flight crew to coordinate responses to system issues and ensure collective situational awareness.	5	5	-	-
	<i>Utilize Onboard Diagnostic Tools and Instruments</i>	10	12	-	-
	PC7: Operate diagnostic equipment such as the Electronic Centralized Aircraft Monitor (ECAM) or Engine Indicating and Crew Alerting System (EICAS) to interpret system data and alerts.	5	6	-	-
	PC8: Interpret data from flight data monitoring systems to anticipate potential system/component problems before they escalate.	5	6	-	-
	<i>Coordinate with Maintenance and Engineering Teams</i>	8	10	-	-
	PC9: Document and report system malfunctions and troubleshooting actions taken during flight to maintenance personnel upon landing.	4	5	-	-

	PC10: Collaborate with engineering teams to provide detailed accounts of in-flight issues to aid in accurate diagnosis and rectification.	4	5	-	-
	Total Marks	48	52		
AAS/N0502: Follow safety and security procedures	<i>Comprehending the safety and security procedures for conduct of operations</i>	52	48	-	-
	PC1. comply with the organisations safety and security policies and procedures	5	5	-	-
	PC2. comply with the regulatory guidelines on safe conduct of operations and maintenance of conditions to thwart any acts of unlawful interference	5	5	-	-
	PC3. report any identified breaches of safety, and security policies and procedures to the designated person	5	5	-	-
	PC4. coordinate with other resources at the workplace (within and outside the organisation) to achieve a safe and secure environment	10	10	-	-
	PC5. identify and mitigate any safety and security hazards like illness, accidents, fires or acts of unlawful interference if it falls within the limits of individuals authority	5	5	-	-
	PC6. report any hazards outside the individual's authority to the relevant person in line with organisational procedures and regulatory guidelines	10	10	-	-
	PC7. follow organisations' emergency procedures for accidents, fires or acts of unlawful interference	2	3	-	-
	PC8. identify and recommend opportunities for improving health, safety, and security to the designated person	8	2	-	-
	PC9. Complete all health and safety records are updates and procedures well defined	2	3	-	-
	Total Marks	52	48		
	<i>Introduction to Employability Skills</i>	1	1	-	-
	PC1. identify employability skills required for jobs in various industries	-	-	-	-
	PC2. identify and explore learning and employability portals	-	-	-	-
	<i>Constitutional values – Citizenship</i>	1	1	-	-
	PC3. recognize 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.	-	-	-	-
	PC4. follow environmentally sustainable practices	-	-	-	-
	<i>Becoming a Professional in the 21st Century</i>	2	4	-	-

DGT/VSQ/N0102: Employability skills	PC5. recognize the significance of 21st Century Skills for employment	-	-	-	-
	PC6. practice the 21st Century Skills such as Self- Awareness, Behaviour 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	-	-	-	-
	<i>Basic English Skills</i>	2	3	-	-
	PC7. use basic English for everyday conversation in different contexts, in person and over the telephone	-	-	-	-
	PC8. read and understand routine information, notes, instructions, mails, letters etc. written in English	-	-	-	-
	PC9. write short messages, notes, letters, e-mails etc. in English	-	-	-	-
	<i>Career Development & Goal Setting</i>	1	2	-	-
	PC10. understand the difference between job and career	-	-	-	-
	PC11. prepare a career development plan with short- and long-term goals, based on aptitude	-	-	-	-
	<i>Communication Skills</i>	2	2	-	-
	PC12. follow verbal and non-verbal communication etiquette and active listening techniques in various settings	-	-	-	-
	PC13. work collaboratively with others in a team	-	-	-	-
	<i>Diversity & Inclusion</i>	1	2	-	-
	PC14. communicate and behave appropriately with all genders and PwD	-	-	-	-
	PC15. escalate any issues related to sexual harassment at workplace according to POSH Act	-	-	-	-
	<i>Financial and Legal Literacy</i>	2	3	-	-
	PC16. select financial institutions, products and services as per requirement	-	-	-	-
	PC17. carry out offline and online financial transactions, safely and securely	-	-	-	-
	PC18. identify common components of salary and computing income, expenses, taxes, investments etc.	-	-	-	-
	PC19. identify relevant rights and laws and use legal aid to fight against legal exploitation	-	-	-	-
	<i>Essential Digital Skills</i>	3	4	-	-
	PC20. operate digital devices and carry out basic internet operations securely and safely	-	-	-	-
	PC21. use e- mail and social media platforms and virtual collaboration tools to work effectively	-	-	-	-
	PC22. use basic features of word processor, spreadsheets, and presentations	-	-	-	-

<i>Entrepreneurship</i>	2	3	-	-
PC23. identify different types of Entrepreneurship and Enterprises and assess opportunities for potential business through research	-	-	-	-
PC24. develop a business plan and a work model, considering the 4Ps of Marketing Product, Price, Place and Promotion	-	-	-	-
PC25. identify sources of funding, anticipate, and mitigate any financial/ legal hurdles for the potential business opportunity	-	-	-	-
<i>Customer Service</i>	1	2	-	-
PC26. identify different types of customers	-	-	-	-
PC27. identify and respond to customer requests and needs in a professional manner.	-	-	-	-
PC28. follow appropriate hygiene and grooming standards	-	-	-	-
<i>Getting ready for apprenticeship & Jobs</i>	2	3	-	-
PC29. create a professional Curriculum vitae (Résumé)	-	-	-	-
PC30. search for suitable jobs using reliable offline and online sources such as Employment exchange, recruitment agencies, newspapers etc. and job portals, respectively	-	-	-	-
PC31. apply to identified job openings using offline /Online methods as per requirement	-	-	-	-
PC32. answer questions politely, with clarity and confidence, during recruitment and selection	-	-	-	-
PC33. identify apprenticeship opportunities and register for it as per guidelines and requirements	-	-	-	-
Total Marks	20	30		
Grand Total	546	604	-	-

Annexure: 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.

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 assigned to the assessment agencies for conducting the assessment on SIP or email
- Assessment agencies send the assessment confirmation to VTP/TC looping SSC
- Assessment agency deploys the ToA certified Assessor for executing the assessment
- SSC monitors the assessment process & records

2. 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.
- Check the Assessment start and end time to be as 10:00 AM and 05:00 PM
- Check the Eligibility of Attendance

3. Assessment of Quality Assurance levels/Framework:

- Question bank is created by the Subject Matter Experts (SME) are verified by the other SME
- Questions are mapped to the specified assessment criteria
- Assessor must be ToA certified & trainer must be ToT Certified
- Assessment agency must follow the Assessment Guidelines to conduct the Assessment

4. Types of evidence or evidence-gathering protocol:

- Time-stamped & geotagged reporting of the assessor from assessment location
- Centre photographs with signboards and scheme specific branding
- Biometric or manual attendance sheet (stamped by TP) of the trainees during the training period.
- Time-stamped & geotagged assessment (Theory + Viva + Practical) photographs & videos

5. Method of verification or validation:

- Surprise visit to the assessment location.
- Random audit of the batch
- Random audit of any Candidate

6. Method for assessment documentation, archiving, and access

- Hard copies of the documents are stored
- Soft copies of the documents & photographs of the assessment are uploaded / accessed from Cloud Storage
- Soft copies of the documents & photographs of the assessment are uploaded / accessed from Cloud Storage • Soft copies of the documents & photographs of the assessment are stored in the Hard Drives

On the Job:

1. Each module (which covers the job profile of Aerospace CNC Machinist) will be assessed separately.
2. The candidate must score 60% in each module to successfully complete the OJT.
3. Tools of Assessment that will be used for assessing whether the candidate is having desired skills and etiquette of dealing with customers, understanding needs & requirements, assessing the customer and perform Soft Skills effectively:
 - Videos of Trainees during OJT
 - Answer Sheets of Question Banks
 - Assessing the Logbook entries of Trainees at Employer location
 - Employer Performance Feedback.

4. Assessment of each Module will ensure that the candidate is able to:
- Effective engagement with the customers
 - Understand the working of various tools and equipment

Annexure: 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
QP	Qualification Pack
ATC	Air Traffic Control
ICAO	International Civil Aviation Organization
VFR	Visual Flight Rules
IFR	Instrument Flight Rules
SOP	Standard Operating Procedure
MCC	Multi-Crew Coordination
RT	Radio Telephony
PF	Pilot Flying

Glossary

Term	Description
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.
Long Term Training	Long-term skilling means any vocational training program undertaken for a year and above. https://ncvet.gov.in/sites/default/files/NCVET.pdf