QUALIFICATION FILE

Assistant Drone Technician

☒ **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: 3

Submitted By:

Electronics Sector Skill Council of India (ESSCI)

155, 2nd Floor, ESC House

Okhla Industrial Area - Phase 3,

New Delhi – 110020

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Assistant Drone Technician

Section 1: Basic Details

1.	**Qualification Name**	**Assistant Drone Technician**	
2.	**Sector/s**	**Electronics**	
3.	**Type of Qualification:** ☒ **New** ☐ **Revised** ☐ **Has Electives/Options** ☐ **OEM**	**NQR Code & version of existing/previous qualification:** *(change to previous, once approved)*	**Qualification Name of existing/previous version:**
4.	a. **OEM Name** b. **Qualification Name** *(Wherever applicable)*		
5.	**National Qualification Register (NQR) Code & Version** *(Will be issued after NSQC approval)*	QG-03-EH-00575-2023-V1-ESSC	6. **NCrF/NSQF Level: 3**
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**	An Assistant Drone Technician conducts routine Maintenance, Troubleshoots, Bench Testing and Flying while ensuring adherence to standard working practices. The individuals in this job maintain, troubleshoots, test and fly drones of varying sizes that are used for various applications such as aerial photography & videography, transporting goods, firefighting, survey and mapping, powerline Inspection, Industrial Inspection, Emergency Operations etc.	

9.	**Eligibility Criteria for Entry for Student/Trainee/Learner/Employee**	**a. Entry Qualification & Relevant Experience:**

S. No.	Academic/Skill Qualification (with Specialization - if applicable)	Required Experience (with Specialization - if applicable)
1	10th Grade Pass	NA
2	8th Grade Pass + NTC (2 years after 8th)	NA
3	8th Grade Pass	2 years relevant experience
4	9th Grade Pass	1 year relevant experience

b. Age: 18 years

10.	**Credits Assigned to this Qualification, Subject to Assessment** *(as per National Credit Framework (NCrF))*	14	11. **Common Cost Norm Category (I/II/III)** *(wherever applicable)*: **I**

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

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

☐Offline ☐Online ☒Blended

Training Delivery Modes	Theory (Hours)	Practical (Hours)	OJT Mandatory (Hours)	OJT Recommended (Hours)	Total (Hours)
Classroom (offline)	00:00	210:00	90:00	00:00	420:00
Online	120:00	00:00	00:00	00:00	

(Refer Blended Learning Annexure for details)

14.	**Aligned to NCO/ISCO Code/s** *(if no code is available mention the same)*	NCO-2015/8212.0400
15.	**Progression path after attaining the qualification** *(Please show Professional and Academic progression)*	Drone Service Technician/ Drone Manufacturing & Assembly Technician
16.	**Other Indian languages in which the Qualification & Model Curriculum are being submitted**	NA
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 **If "Yes", specify applicable type of Disability:**
19.	**How Participation of Women will be Encouraged**	No gender sensitization
20.	**Are Greening/ Environment Sustainability Aspects Covered** *(Specify the NOS/Module which covers it)*	☒ Yes ☐ No
21.	**Is Qualification Suitable to be Offered in Schools/Colleges**	Schools ☒ Yes ☐ No Colleges ☒ Yes ☐ No
22.	**Name and Contact Details of Submitting / Awarding Body SPOC** *(In case of CS or MS, provide details of both Lead AB & Supporting ABs)*	**Name:** Dr. Abhilasha Gaur **Email:** ceo@essc-india.org **Contact No.:** 011 – 8447738501 **Website:** https://www.essc-india.org/
23.	**Final Approval Date by NSQC:** *23.06.2023*	**24. Validity Duration:** 3 Years **25. Next Review Date:** 23.06.2026

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.	Theoretical Concept of Drone Technology	ELE/N7008 & V1.0	Core	3	4	21	39	30		90	50	20		30	100	20
2.	Practical Aspect of Drones and Simulation Techniques	ELE/N7007 & V1.0	Core	3	4	30	60	30		120	20	50	20	10	100	30
3.	Drone Testing & Maintenances	ELE/N7009 & V1.0	Core	3	4	30	60	30		120	10	50	20	20	100	30
4.	Communicate and Coordinate effectively with others	ELE/N9972 & V2.0	Non-core	3	1	15	15			30	35	65			100	10
5.	Employability Skills (60 hours)	DGT/VSQ/N0102 & V1.0	Non-core	3	1	24	36			60	20	30			50	10
Duration (in Hours) / Total Marks						**120**	**210**	**90**		**420**	**135**	**215**	**40**	**60**	**450**	**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/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																

Assessment - Minimum Qualifying Percentage
*Please specify **any one** of the following:*

Minimum Pass Percentage – Aggregate at qualification level: __50__% *(Every Trainee should score specified minimum aggregate passing percentage at qualification level to successfully clear the assessment.)*

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

Section 3: Training Related

1.	**Trainer's Qualification and experience in the relevant sector (in years)** *(as per NCVET guidelines)*	BE/ BTech (Electrical/ Mechanical/ Electronics) with 1 year industrial and 1 year training experience in the field of Drones Or Diploma/ITI (Electrical/ Mechanical/ Electronics) with 2 years industrial and 1 year training experience in the field of Drone Or Certified in relevant CITS Trade
2.	**Master Trainer's Qualification and experience in the relevant sector (in years)** *(as per NCVET guidelines)*	BE/ BTech (Electrical/ Mechanical/ Electronics) with 2 years industrial and 2 years training experience in the field of Drone Or Diploma (Electrical/ Mechanical/ Electronics) with 3 years industrial and 2 years training experience in the field of Drone
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)*	BE/ BTech (Electrical/ Mechanical/ Electronics) with 2 years industrial and 2 years assessment experience in Drone Or Diploma/ITI (Electrical/ Mechanical/ Electronics) with 3 years industrial and 2 years assessment experience in Drone Or Certified in relevant CITS Trade
2.	**Proctor's Qualification and experience in relevant sector (in years)** *(as per NCVET guidelines)*	NA
3.	**Lead Assessor's/Proctor's Qualification and experience in relevant sector (in years)** *(as per NCVET guidelines)*	NA
4.	**Assessment Mode** *(Specify the assessment mode)*	Blended
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 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):** Yes
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:** 5
5.	**Estimated nos. of persons to be trained and employed:** 5000
6.	**Evidence of Concurrence/Consultation with Line Ministry/State Departments:** In progress If "No", why:

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Section 6: Annexure & Supporting Documents Check List

Specify Annexure Name / Supporting document file name

1.	**Annexure:** NCrF/NSQF level justification based on NCrF level/NSQF descriptors *(Mandatory)*	*Attached*
2.	**Annexure:** List of tools and equipment relevant for qualification *(Mandatory, except in case of online course)*	*Attached*
3.	**Annexure:** Detailed Assessment Criteria *(Mandatory)*	*Attached*
4.	**Annexure:** Assessment Strategy *(Mandatory)*	*Attached*
5.	**Annexure:** Blended Learning *(Mandatory, in case selected Mode of delivery is "Blended Learning")*	*Filled*
6.	**Annexure:** Multiple Entry-Exit Details *(Mandatory, in case qualification has multiple Entry-Exit)*	*Filled*
7.	**Annexure:** Acronym and Glossary *(Optional)*	*Attached*
8.	**Supporting Document:** Model Curriculum *(Mandatory – Public view)*	*Attached*
9.	**Supporting Document:** Career Progression *(Mandatory - Public view)*	*Attached*
10.	**Supporting Document:** Occupational Map *(Mandatory)*	Attached
11.	**Supporting Document:** Assessment SOP *(Mandatory)*	
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	**Demands a wide range of specialised technical skill, clarity of knowledge and practice in broad range of activity involving standard and non-standard practices.** • Theoretical concept of drones • Practical aspect of drone and simulation • Drone testing and maintenance.	Assistant Drone Technician is responsible for testing and maintenance of drones	3
Professional and Technical Skills/ Expertise/ Professional Knowledge	**Factual and theoretical knowledge in broad contexts within a field of work or study.** • Drone Operations and its Aerodynamics in different Drone systems	An Assistant Drone Technician is an assistant to Drone Service Technician Hence Level 3	3

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Employment Readiness & Entrepreneurship **Skills & Mind-set/Professional Skill**	**A range of cognitive and practical skills required to generate solutions to specific problems in a field of work or study.** - Electronics, Drone parts and aerodynamic of behind drone technology - Rules and Regulations by DGCA - ATC Procedure and Radio Telephony techniques - Understanding of Different Drone Types	The job role of Assistant Drone Technician is to provide basic repair and maintenance of drones which can work as an assistant for Drone Service Technician Hence Level 3	3
Broad Learning Outcomes/Core Skill	- Understanding of Simulation Setup and its importance for the Drone Operator - Different Types of Drone Simulator and their usage - Understanding drone parts using a simulator - Major components required for a Drone Simulator - Setting up of Drone Simulator from scratch - Simulating individual motors in a simulator and understanding how various motions of a drone work - Real-life tasks for using drones: Agriculture, surveillance, firefighting - How to switch between different models and modes in a Drone Simulator	An Assistant Drone Technician must learn how to integrate simulator software and hardware, understand various flying maneuvers and learn multiple flying scenarios. Hence Level 3	3
Responsibility	Responsibility of completing the work assigned and reporting the same as per standards. - Preflight check and starting up of Drone - Preparation Cum Coordination for Flight - Take off and Flight Stage - Approach and Landing of a Drone Systems - After Flight Checks - Simulator Excercises	An Assistant Drone Technician Inspect the functional components of a drone thoroughly using required components , Identify electronic components that are malfunctioning and need to be repaired / replaced and Perform repair of the defective components as per company specified maintenance Guidelines Hence Level 3	3

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Annexure: Tools and Equipment (Lab Set-Up)

List of Tools and Equipment
Batch Size: 30

S. No.	Tool / Equipment Name	Specifications	Quantity for specified Batch size
1	Soldering Station	Sets	10 sets
2	Screwdriver	No	1 No.
3	Torque Screwdriver	No	1 No.
4	Nut Driver	Sets	1 set
5	Safety Knife	Sets	1 set
6	Pilers	Sets	1 set
7	Wire Strippers	No	6 Nos
8	Glue Gun	No	6 Nos
9	Tweezers	No	6 Nos
10	Multimeter	No	6 Nos
11	Heat Gun	No	6 Nos
12	Desk Light and Magnifier	No	6 Nos
13	Digital Weighing Scale	No	6 Nos
14	Wattmeter and clamp meter	No	6 Nos
15	Motor thrust stand	As required	As required
16	Connectors	As required	As required
17	Drone Simulator to understand drone construction and physics with actual real life tasks	No	4 Nos
18	Micro size Drone DIY kit (based on Service Technician QP)	No	2 Nos

Classroom Aids
The aids required to conduct sessions in the classroom are:

1. Whiteboard
2. Projector
3. Computer/Laptop
4. Chairs
5. Tables
6. Whiteboard marker

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	Eduvance (Vanmat Technologies Pvt. Ltd)	Dr. Jonathan Joshi	CEO		9820749235	jon@eduvance.in	
2	Pixroot Technologies Pvt. Ltd.	Md. Enyetullah Mondal	Director		7001087899	enayet@pixroottechnologies.com	
3	Squadrone Infra and Mining Pvt. Ltd.	MR. NVD Sai	UAV Engineer		9902104423	nvdsai@squadrone.co.in	
4	Throttle Aerospace Systems Pvt. Ltd.	Mr. Nagendran Kandasamy	CEO & Director		8088746274		
5	Sensefly Innovations Pvt. Ltd.	Mr. Kanav Kumar	Director				

Annexure: Training & Employment Details

Training and Employment Projections:

Year	Total Candidates	Women	People with Disability
	Estimated Training # Total	Estimated Training # Women	Estimated Training # PwD
1	1000	NA	NA
2	2000	NA	NA
3	2000	NA	NA

Data to be provided year-wise for next 3 years

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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

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.
2.

Content availability for previous versions of qualifications:

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

Languages in which Content is available:

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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	• Books/ e-books • Presentations • Reference Material • Audio / Video Modules	30:70
2	☒Imparting Soft Skills, Life Skills, and Employability Skills /Mentorship to Learners	• Self-Learning Videos • Broadcasts • Mobile Learning • Curated Digital content	30:70
3	☒Showing Practical Demonstrations to the learners	• Video Content • E-Resource library • AR/ VR/ XR	30:70
4	☒Imparting Practical Hands-on Skills/ Lab Work/ workshop/ shop floor training	• Training tools (tools list attached) • Video Play • Presentations	30:70
5	☒Tutorials/ Assignments/ Drill/ Practice	• Online Question Bank • Mobile Quick test app • MCQ based tests	30:70
6	☒Proctored Monitoring/ Assessment/ Evaluation/ Examinations	• Assessment engine for Essays • Up-loadable file examinations • Mock test sessions	30:70
7	☒On the Job Training (OJT)/ Project Work Internship/ Apprenticeship Training	• Online tests • Offline assessments	30:70

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
ELE/N7008 – Theoretical Concept of Drone Technology	*Understanding of Ground Subjects involved in Drone Pilot Training*	**10**	**-**	**-**	**10**
	PC1. Stakeholders of the Drone Technology & their laws behind the technology.	2	-	-	2
	PC2. Different type of Law regarding Drone Technology / The Drone Rules 2021	2	-	-	2

	PC3. Airspace Structure for the Drone Technology	2	-	-	2
	PC4. Basic principles of flight	2	-	-	2
	PC5. ATC procedures & Radio Telephony (non FRTOL)/ ATC procedures Intermediate	2	-	-	2
	Different types of Drone Systems	**20**	**-**	**-**	**10**
	PC6. Fixed-wing Drone Operations and its Aerodynamics	6	-	-	3
	PC7. Rotorcraft Drone Operations and its Aerodynamics	7	-	-	3
	PC8. Hybrid Drone Operations and its Aerodynamics	7	-	-	4
	Data Analysis and Check for Drone Systems	**10**	**20**	**-**	**10**
	PC9. Weather and Meteorology for Drone Technology	1	1	-	1
	PC10. Crew Resource Management, Instrument Flying and Weight & Balance for Drone Technology	1	2	-	1
	PC11. Performance of Drone	1	3	-	1
	PC12. Drone Equipment Maintenance (Assembling & Manufacturing)	1	3	-	1
	PC13. Risk Assessment & Analysis - Safety Management/ Emergency Procedures	1	2	-	1
	PC14. Different payload, Installation and Utilization	3	4	-	3
	PC15. Intro to Drone Data & Analysis	2	5	-	2
	Reporting to Superior	**10**	**-**	**-**	**-**
	PC16. Inform on the workload and completion status	2			
	PC17. report work status through proper documentation as per organizational standards	3			
	PC 18. intimate the problems that cannot be resolved at field level with reason	5			
	Total Marks	**50**	**20**	**-**	**30**
ELE/N7007 – Practical aspect of Drones and Simulation Techniques	*Practical Aspect of Drones and Simulation Techniques*	**20**	**50**	**20**	**10**
	PC1. Understanding of Simulation Setup and its importance for the Drone Operator.	4	-	-	
	PC2. Different Types of Drone Simulator and their usage and constructing a drone using a simulator	4	-	-	2
	PC3. Major components required for a Drone Simulator	4	-	-	3
	PC4. Setting up of Drone Simulator from scratch	4	10	-	3
	PC5. How to switch between different models and modes in a Drone Simulator	4	3	-	2
	PC6. Preflight check and starting up your Drone	-	3	-	-
	PC7. Preparation Cum Coordination for Flight	-	4	-	-
	PC8. Take off and Flight Stage	-	5	3	-
	PC9. Approach and Landing of a Drone Systems	-	5	3	-
	PC10. After Flight Checks	-	5	4	-

	PC11. Simulator Exercises: Construction of a drone, Simulating the individual motors of a drone, ability to perform practical exercises of a drone in real world scenarios: Agriculture, surveillance etc	-	15	10	-
	Total Marks	**20**	**50**	**20**	10
ELE/N7009– Drone Testing and Maintenance	*Drone Troubleshooting, Repair & Maintenance and Testing*	**10**	**20**	**10**	**10**
	PC1. Select relevant troubleshooting-instruction sheet, tools, equipment for the repair of the Drone	1	-	-	1
	PC2. Perform preliminary check-up of the Drone and evaluate the replacement or repair of modules	1	4	-	1
	PC3. Review recommended practices for switching on the Drone and the remote controller and standard work practices to disassemble the defective components	1	-	-	1
	PC4. Inspect the functional components of a drone thoroughly using required components	1	4	-	1
	PC5. Identify electronic components that are malfunctioning and need to be repaired / replaced	1	4	3	1
	PC6. Perform repair of the defective components as per company specified maintenance Guidelines	1	4	3	1
	PC7. Install repaired / fresh electronic components using appropriate tools and equipment	1	4	4	1
	PC8. Assemble the Drone components as per desirable industry practices	1	-	-	1
	PC9. Assess that the Drone is working effectively post repair and maintenance	1	-	-	1
	PC10. Perform standard safety checks of the Drone post repair and maintenance	1	-	-	1
	Drone Flying Testing and Activities	-	**30**	**10**	**10**
	PC11. Perform a demo run of the Drone to ensure the proper functioning of Drone	-	2	5	-
	PC12. Perform all the Preflight checks as per Standard SOP	-	2	5	-
	PC13. Flying Exercises: Take off	-	2	-	
	PC14. Flying Exercises: Hover	-	2	-	1
	PC15. Flying Exercises: Gentle Turns	-	2	-	1
	PC16. Flying Exercises: Medium and steep turns	-	2	-	1
	PC17. Flying Exercises: Level Out	-	2	-	1
	PC18. Flying Exercises: Disorientation and recovery	-	2	-	1
	PC19. Flying Exercises: Climbing and Climbing turns	-	2	-	1
	PC20. Flying Exercises: Descend and Descending turns	-	2	-	1
	PC21. Flying Exercises: Circuit Flying	-	3	-	1
	PC22. Flying Exercises: Abnormal/ Emergency Procedure	-	3	-	1
	PC23. Flying Exercises: Practical Forced Landing	-	4	-	1
	Total Marks	**10**	**50**	**20**	**20**

ELE/N9972: Communicate and coordinate effectively with others	*Communicate effectively with supervisor andcolleagues*	27	51	-	-
	PC1. communicate potential hazards of a particular location	4	7	-	-
	PC2. comply with organisation's policies and procedures for working with colleagues	4	7	-	-
	PC3. maintain personal hygiene and professional appearance	4	7	-	-
	PC4. seek clarification on the information provided by supervisor, if needed	4	8	-	-
	PC5. respect the personal and professional space of colleagues and superiors	3	8	-	-
	PC6. report work completed as per the schedule to superior and inform of any deviations or anomalies	4	7	-	-
	PC7. analyse and act on feedback received from supervisor	4	7	-	-
	Respect gender and ability differences	8	14	-	-
	PC8. work depicting proper behaviour towards all genders and people with disability	4	7	-	-
	PC9. identify acts of discrimination and sexual harassment and report to concerned authorities	4	7	-	-
Total Marks		35	65	-	-
DGT/VSQ/N0102 - Employability Skills (60 hours)	*Introduction to Employability Skills*	1	1	-	-
	PC1. identify employability skills required for jobs in various industries	-	-	-	-
	PC2. identify and explore learning and employability portals	-	-	-	-
	Constitutional values – Citizenship	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	-	-	-	-
	Becoming a Professional in the 21st Century	2	4	-	-
	PC5. recognize the significance of 21st Century	-	-	-	-

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	Skills for employment				
	PC6. practice the 21st Century Skills such as Self- Awareness, Behavior Skills, time management, critical and adaptive thinking, problem-solving, creative thinking, social and cultural awareness, emotional awareness, learning to learn for continuous learning etc. in personal and professional life	-	-	-	-
	Basic English Skills	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	-	-	-	-
	Career Development & Goal Setting	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	-	-	-	-
	Communication Skills	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	-	-	-	-
	Diversity & Inclusion	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	-	-	-	-
	Financial and Legal Literacy	2	3	-	-
	PC16. select financial institutions, products and services as per requirement	-	-	-	-
	PC17. carry out offline and online financial transactions, safely and securely	-	-	-	-

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PC18. identify common components of salary and compute income, expenses, taxes, investments etc	-	-	-	-
PC19. identify relevant rights and laws and use legal aids to fight against legal exploitation	-	-	-	-
Essential Digital Skills	**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	-	-	-	-
Entrepreneurship	**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	-	-	-	-
Customer Service	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	-	-	-	-
Getting ready for apprenticeship & Jobs	**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		**135**	**215**	**40**	**60**

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.

1. Assessment System Overview:
   - Batches assigned to the assessment agencies for conducting the assessment on SDMS/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:
   - Confirm that the centre is available at the same address as mentioned on SDMS or SIP
   - Check the duration of the training.
   - Check the Assessment Start and End time to be as 10 a.m. and 5 p.m.
   - 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 mode of assessment—Online (TAB/Computer) or Offline (OMR/PP).
   - Confirm the number of TABs on the ground are correct to execute the Assessment smoothly.
   - Check the availability of the Lab Equipment for the particular Job Role.

3. Assessment Quality Assurance levels / Framework:
   - Question papers created by the Subject Matter Experts (SME)
   - Question papers created by the SME verified by the other subject Matter Experts
   - Questions are mapped with NOS and PC
   - Question papers are prepared considering that level 1 to 3 are for the unskilled & semi-skilled individuals, and level 4 and above are for the skilled, supervisor & higher management
   - 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 stored in the Hard Drives

On the Job:
1. Each module (which covers the job profile of Assistant Drone Technician) will be assessed separately.
2. The candidate must score 50% 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 Log Book entries of Trainees at Employer location
   - Employer Performance Feedback.
4. Assessment of each Module will ensure that the candidate is able to:
   - Understand the theoretical concept of Drone Technology
   - Understand practical aspect of drones and perform simulation techniques
   - Perform testing and maintenance of drones
   - Work effectively at the workplace

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

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

Assistant Drone Technician