



QUALIFICATION FILE

Artificial Insemination 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: 4

Submitted By:

Agriculture Skill Council of India

Unit No. 101, First Floor, Greenwoods Plaza, Block 'B', Greenwoods City, Sector 45, Gurugram -122009, Haryana.

Table of Contents

Section 1: Basic Details	3
Section 2: Module Summary	5
NOS/s of Qualifications.....	5
Mandatory NOS/s:	5
Assessment - Minimum Qualifying Percentage.....	5
Section 3: Training Related.....	6
Section 4: Assessment Related.....	6
Section 5: Evidence of the need for the Qualification.....	7
Section 6: Annexure & Supporting Documents Check List.....	7
Annexure 1: Evidence of Level.....	8
Annexure 2: Tools and Equipment (Lab Set-Up)	9
Annexure 3: Industry Validations Summary	10
Annexure 4: Training & Employment Details	11
Annexure 5: Detailed Assessment Criteria	12
Annexure 6: Assessment Strategy	18
Annexure: Acronym and Glossary	22

Section 1: Basic Details

1.	Qualification Name	Artificial Insemination Technician													
2.	Sector/s	Agriculture													
3.	Type of Qualification: <input type="checkbox"/> New <input checked="" type="checkbox"/> Revised <input type="checkbox"/> Has Electives/Options <input type="checkbox"/> OEM	NQR Code & version of existing qualification: 2021/AGR/ASCI/04642 & Version 2.0	Qualification Name of existing/previous version: Artificial Insemination Technician												
4.	a. OEM Name b. Qualification Name (Wherever applicable)	NA													
5.	National Qualification Register (NQR) Code &Version (Will be issued after NSQC approval)	2022/AGR/ASCI/06533 & Version 3.0	6. NCrf/NSQF Level: 4												
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 Artificial Insemination Technician (AI Technician) also known as Community Animal Husbandry Assistant, Gopalmitra, Pranibandhu, etc. is a person preferably selected from his/her own community, primarily to assist farmers in cattle breeding and management of dairy animals. He/she normally works under the direct supervision and monitoring of any registered development / private / producer-led agency. An Artificial Insemination Technician needs to work under the direct or distant supervision of a registered veterinarian while offering services notified as Minor Veterinary Services under the provision of the Indian Veterinary Council Act (No.52 of 1984).													
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>12th Class</td> <td></td> </tr> <tr> <td>2</td> <td>10th Class</td> <td>2 Year of relevant experience</td> </tr> <tr> <td>3</td> <td>Previous relevant qualification of NSQF Level 3 and with minimum education as 5th grade pass</td> <td>2 Year relevant experience</td> </tr> </tbody> </table> b. Age: 18		S. No.	Academic/Skill Qualification (with Specialization - if applicable)	Required Experience (with Specialization - if applicable)	1	12th Class		2	10th Class	2 Year of relevant experience	3	Previous relevant qualification of NSQF Level 3 and with minimum education as 5th grade pass	2 Year relevant experience
S. No.	Academic/Skill Qualification (with Specialization - if applicable)	Required Experience (with Specialization - if applicable)													
1	12th Class														
2	10th Class	2 Year of relevant experience													
3	Previous relevant qualification of NSQF Level 3 and with minimum education as 5th grade pass	2 Year relevant experience													

10.	Credits Assigned to this Qualification, Subject to Assessment (as per National Credit Framework (NCrF))	17	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)	<input checked="" type="checkbox"/> Offline <input type="checkbox"/> Online <input type="checkbox"/> Blended <table border="1"> <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>180</td> <td>180</td> <td>150</td> <td></td> <td>510</td> </tr> <tr> <td>Online</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table> (Refer Blended Learning Annexure for details)				Training Delivery Modes	Theory (Hours)	Practical (Hours)	OJT Mandatory (Hours)	OJT Recommended (Hours)	Total (Hours)	Classroom (offline)	180	180	150		510	Online					
Training Delivery Modes	Theory (Hours)	Practical (Hours)	OJT Mandatory (Hours)	OJT Recommended (Hours)	Total (Hours)																		
Classroom (offline)	180	180	150		510																		
Online																							
14.	Aligned to NCO/ISCO Code/s (if no code is available mention the same)	NCO-2015/6121.0500																					
15.	Progression path after attaining the qualification (Please show Professional and Academic progression)	Artificial Insemination Technician (L4), Animal Lab Assistant(L5)																					
16.	Other Indian languages in which the Qualification & Model Curriculum are being submitted	Hindi																					
17.	Is similar Qualification(s) available on NQR-if yes, justification for this qualification	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No URLs of similar Qualifications:																					
18.	Is the Job Role Amenable to Persons with Disability	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If "Yes", specify applicable type of Disability: SHI																					
19.	How Participation of Women will be Encouraged	Batches specific to women will be formed																					
20.	Are Greening/ Environment Sustainability Aspects Covered (Specify the NOS/Module which covers it)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No DGT/VSQ/N0102 (v1.0)																					
21.	Is Qualification Suitable to be Offered in Schools/Colleges	Schools <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Colleges <input checked="" type="checkbox"/> Yes <input type="checkbox"/> 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: Ms Priyanka Prakash Email: priyanka@asci-india.com Website: www.asci-india.com Contact No.: 0124-4670029																					
23.	Final Approval Date by NSQC: 25/11/2021	24. Validity Duration: 3 years post NSQC Approval		25. Next Review Date: 25/11/2024																			

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/NS QF 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	Veterinary First Aid	AGR/N4805 (v2.0)	Core	4	2	20	40			60	34	49		15	98	20
2	Assisting in veterinary extension services	AGR/N4808 (v2.0)	Core	4	2	20	40			60	60	30		10	100	25
3	Development program implementation and marketing in the livestock sector	AGR/N4810 (v3.0)	Core	4	1	20	10			30	30	40		30	100	25
4	Implementation of cattle Breeding Services	AGR/N4820 (v2.0)	Core	4	5	60	90			150	34	44		22	100	25
5	Employability Skills (60 Hours)	DGT/VSQ/N 0102 (v1.0)	Non-Core	4	2	60				60	20	30			50	5
6	OJT (Mandatory)				5			150		150						
Duration (in Hours) / Total Marks					17	180	180	150		510	178	193		77	448	100

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.)

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) <i>(as per NCVET guidelines)</i>	Diploma (Veterinary /Animal Husbandry / Dairying) with 5 years of relevant industry or training experience in Cattle Breeding and Animal Welfare* OR Graduate (Graduate (B. V. Sc.)) with 1 year of relevant industry or training experience in Cattle Breeding and Animal Welfare OR Post Graduate in Animal science
2.	Master Trainer's Qualification and experience in the relevant sector (in years) <i>(as per NCVET guidelines)</i>	5 years of relevant training experience in Cattle Breeding and Animal Welfare after Diploma (Veterinary /Animal Husbandry / Dairying) with 5 years of relevant industry experience in Cattle Breeding and Animal Welfare OR 5 years of relevant training experience in Cattle Breeding and Animal Welfare after Graduation (B. V. Sc.) with 1 year of industry experience in Cattle Breeding and Animal Welfare OR Post Graduate (Animal science)
3.	Tools and Equipment Required for Training	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>(If "Yes", details to be provided in Annexure)</i>
4.	In Case of Revised Qualification, Details of Any Upskilling Required for Trainer	NA

Section 4: Assessment Related

1.	Assessor's Qualification and experience in relevant sector (in years) <i>(as per NCVET guidelines)</i>	B. V. Sc. with 4 years of relevant experience in Animal Science/Veterinary Science /related experience OR M. V. Sc with 2 years of relevant experience in Animal Science/Veterinary Science /related experience OR Ph. D (Veterinary Science/Animal Husbandry/ Veterinary Clinical Medicine/Veterinary Clinical Sciences) 1 year of relevant experience in Animal Science/Veterinary Science /related experience
2.	Proctor's Qualification and experience in relevant sector (in years) <i>(as per NCVET guidelines)</i>	Diploma/Graduate (It is mandatory for a proctor to have technical knowledge/IT knowledge Once a proctor has been on-boarded by any AA, they are oriented about skill ecosystem along with do's and don'ts .)
3.	Lead Assessor's/Proctor's Qualification and experience in relevant sector (in years) <i>(as per NCVET guidelines)</i>	M. V. Sc with 10 years of relevant experience in Animal Science/Veterinary Science /related experience OR

		Ph. D (Veterinary Science/Animal Husbandry/ Veterinary Clinical Medicine/Veterinary Clinical Sciences) 10 years of relevant experience in Animal Science/Veterinary Science /related experience
4.	Assessment Mode (<i>Specify the assessment mode</i>)	Offline
5.	Tools and Equipment Required for Assessment	<input checked="" type="checkbox"/> Same as for training <input checked="" type="checkbox"/> Yes <input type="checkbox"/> 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): under PMKVY scheme
2.	Latest Market Research Reports or any other source (not older than 2 years) (Yes/No): under PMKVY scheme
3.	Government /Industry initiatives/ requirement (Yes/No): Government Initiative, part of PMKVY 4.0
4.	Number of Industry validation provided: 17
5.	Estimated nos. of persons to be trained and employed: 300
6.	Evidence of Concurrence/Consultation with Line Ministry/State Departments: Yes, concurrence from Department of Animal Husbandry and Dairying, Ministry of Fisheries, Animal Husbandry and Dairying

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>)	<i>Annexure-1</i>
2.	Annexure: List of tools and equipment relevant for qualification (<i>Mandatory, except in case of online course</i>)	<i>Annexure-2</i>
3.	Annexure: Detailed Assessment Criteria (<i>Mandatory</i>)	<i>Annexure-5</i>
4.	Annexure: Assessment Strategy (<i>Mandatory</i>)	<i>Annexure-6</i>
5.	Annexure: Blended Learning (<i>Mandatory, in case selected Mode of delivery is "Blended Learning"</i>)	NA
6.	Annexure: Multiple Entry-Exit Details (<i>Mandatory, in case qualification has multiple Entry-Exit</i>)	NA
7.	Annexure: Acronym and Glossary (<i>Optional</i>)	
8.	Supporting Document: Model Curriculum (<i>Mandatory – Public view</i>)	<i>Annexure-7</i>

9.	Supporting Document: Career Progression (<i>Mandatory - Public view</i>)	Animal Lab Assistant(L5)
10.	Supporting Document: Occupational Map (<i>Mandatory</i>)	Annexure-8
11.	Supporting Document: Assessment SOP (<i>Mandatory</i>)	Annexure-9
12.	Any other document you wish to submit:	

Annexure 1: Evidence of Level

NCrF/NSQF Level Descriptors	Key requirements of the job role/ outcome of the qualification	How the job role/ outcomes relate to the NCrF/NSQF level descriptor	NCrF/NSQF Level
Professional Theoretical Knowledge/Process	<ul style="list-style-type: none"> Assisting in cattle breeding Management of Dairy animals Development services 	The Artificial Insemination Technician Individual at this job role is responsible for assisting farmers in cattle breeding and management of dairy animals, which includes limited range of activities of predictable & routine processes such as cattle breeding, management and development related services mostly in the outdoor setting.	4
Professional and Technical Skills/ Expertise/ Professional Knowledge	<ul style="list-style-type: none"> Assist the farmers in animal breeding Quality cattle selection Artificial Insemination Techniques Administer appropriate emergency procedures Application of tools 	The individual need factual knowledge of Artificial Insemination in animal breeding, which includes Processes and principles such as artificial insemination techniques, Breeder database maintenance, quality cattle selection, performance monitoring etc., with limited application of material and tools	4
Employment Readiness & Entrepreneurship Skills & Mind-set/Professional Skill	<ul style="list-style-type: none"> Animal Selection Animal Breeding Artificial Insemination operations Maintain clean and safe workplace 	The individual need desired skills in artificial insemination technique, animal breeding and management operations. Individual should be good in selection and application of tool. The individual should be good in quality animal selection.	4
Broad Learning Outcomes/Core Skill	<ul style="list-style-type: none"> Pre-preparation of artificial insemination Animal Breeding Management Basic arithmetic skills 	In order to correctly perform the tasks related to selection of animal, pre preparation of artificial insemination, breeding, management in the outdoor settings, individual requires communication skills with required clarity, basic arithmetic skills, personal banking and basic understanding of social, political and natural	4

		environment.	
Responsibility	<ul style="list-style-type: none"> Managing the Animal Breed Improvement Programs Application of AI techniques 	The individual works under close supervision and is responsible for own work within defined limit. They are not lack in responsibility (as required under Level 2), nor they do work independently (as required under Level 4).	4

Annexure 2: 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	Video Recording Equipment	Nos	1
2	Cotton Balls or Gauze	Nos	5
3	Fresh Towels	Nos	5
4	Semen Straw (Cow/ buffalo) 0.5 ml	Nos	5
5	Liquid nitrogen	Liters	5
6	A warm-water thaw unit with thermometer	nos	1
7	Tweezers	Nos	2
8	Antibacterial Soaps	Nos	2
9	Artificial Insemination sheaths	Nos	3
10	Plastic disposable shoulder-length gloves	Nos	30
11	Paper towels	Nos	2
12	Artificial Insemination Guns	Nos	2
13	Cryocan cylinder	Nos	2
14	Face Masks	Nos	30
15	AI lubricant (Excluding Soap or detergent which is a spermicides)	Nos	2
16	95% alcohol in small plastic jar	Nos	2
17	Rubber gloves	Nos	30
18	Gumboots	Nos	5

19	Scissors or cito cutter	Nos	2
20	Eye-protection glasses	Nos	5

Classroom Aids

The aids required to conduct sessions in the classroom are:

1. Whiteboard
2. Markers

Annexure 3: 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	GenFlow AI	Nitish Gaurav	CEO	Uttar Pradesh	9990213296	business@genflowai.com	
2	Vet Help Line	Dr.Fateha Haque Barbaruah	Director	Assam	0361-2651593	info@vethelplineindia.co.in	
3	Anajori Development Society	Maitur Rahman	President	Assam	9678007273	anajoridevelopmentsociety@gmail.com	
4	Khalsa Vet college	Dr.P.K Kapoor	Principal	Punjab	6283466785	kcvas_amritsar@yahoo.com	
5	Manav Chetna Vikas Kendra	Mr.Sagar	President	Madhya Pradesh	7869098440	sagarchawda@gmail.com	
6	Extension Education Institute (EEI), Anand Agricultural University, Anand	Dr J K Patel	Director, EEI	Gujarat	9601279243	eei@aau.in	
7	KVK Ariyalur	Dr G Aralukannan	Senior Scientist and Head	Tamil Nadu	917671639	kvk.Ariyalur@icar.gov.in	
8	Koshih Seva Foundation	Dr GK Bamanian	President	UP & Gujarat	9627489580	drkgbamanian@gmail.com	
9	Veterinary Training Centres, Upper Shillong, Animal Husbandry and Veterinary Department,	Dr. M Tyngkan	Assistant Director		9436117372	icdpmegh@gmail.com	

	Government of Meghalaya						
10	Pandit Jawaharlal Nehru College of Agriculture and Research Institute (PAJANCOA&RI)	Dr.K.S. KUMARAVEL	Assistant Professor	U.T of Puducherry	9442155624	kriskumaravel@gmail.com	
11	College of Veterinary Science, Sri Venkateswara Veterinary University Tirupati, Andhra Pradesh	Dr Y Ravindra Reddy	Professor and Head	Andhra Pradesh	9985484175	yeddularavi88@gmail.com	
12	State Level Training Centre, Gokhalenagar Pune	Dr. Sameer Chandrakant Borkar	Principal	Maharashtra	2025659034	sltc.pune@gmail.com	
13	Krishi Vigyan Kendra, Darrang	Dr. Abdul Hafiq	Senior Scientist and Head	Assam	9435389521	kvkdarrangmangaldai@gmail.com	
14	Krishi Gram Vikas Kendra ,Rukka, Jharkhand	Rajesh Kumar	Training Manager	Jharkhand	9534546433	rajesh.k@kgvk.org	
15	Panjat Welfare Trust,Ranchi	Dr. Mintu S Prakash	Secretery	Jharkhand	8210654659;	Vetcall547@gmail.com; sharmamintu547@gmail.com	
16	Tulsi Krishi Vigyan Kendra- Deendayal Research Institute, Chitrakoot (UP)	Dr Chandra Mani Tripathy	Senior Scientist & Head	8208873126	8208873126	Tulsi Krishi Vigyan Kendra- Deendayal Research Institute, Chitrakoot (UP)	
17	Sudha	Ashwani Mandal	Asst manager-procurement	Bihar	9473341058	sudha.coop@gmail.com	

Annexure 4: 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
2022-23	100	50	30	10		

2023-24	100	50	30	10		
2024-25	100	50	30	10		

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
V1.0	2022-23	491	487	487	179								
V1.0	2021-22	20	16	16									

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. Non-PMKVY

Content availability for previous versions of qualifications:

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

Languages in which Content is available: Hindi and English

Annexure 5: 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
AGR/N4805: Veterinary First Aid	<i>Cleaning and washing of muzzle, mouth, hooves, feet, etc. with antiseptic solutions</i>	2	7	-	1
	PC1. prepare an aseptic solution				
	PC2. clean hooves, feet and other areas with antiseptic solutions				
	<i>Treatment of non-infectious conditions like indigestion, anorexia, constipation, tympani, impaction, diarrhea etc.</i>	15	10	-	5
	PC3. analyze the emergency situation and use commonly suggested medications / follow precautions as per manual prepared by supervisor				
	PC4. identify common symptoms of diseases in animals and report accordingly				
	PC5. identify common infection/scheduled animal diseases and ensure timely reporting of the same				

	<i>Provide immediate support to accidental situations like poisoning, sun-stroke, electrocution, burn injuries, etc.</i>	7	8	-	3
	PC6. identify the cause of accident from symptoms				
	PC7. assess the severity of the accident and suggest for consultation with a veterinarian				
	PC8. provide basic/immediate care as specified for each type of accidents				
	<i>Handling of superficial wound and trauma</i>	5	12	-	3
	PC9. clean and protect the wound and stop bleeding				
	<i>Initial support in cases like prolapse of uterus.</i>	5	12	-	3
	PC10. carry out aseptic handling and protection of the prolapsed organ(s) before the arrival of a veterinarian				
	Total Marks	34	49	-	15
	<i>Promoting approved technology and best practices (including organic practices) in livestock farming, handling animal products</i>	30	20	-	2
	PC1. understand and explain the applicability and benefit associated with common approved technology(s) / best practice(s) in the context of local situations, opportunities, and constraints				
	PC2. give feedback on technology application in the field and need for improvement				
	PC3. organize extension events based on farmer convenience and seasonal suitability				
	<i>Assist farmers on quality farm input selection and procurement</i>	20	10	-	-
	PC4. understand and explain quality parameters regarding various farm inputs				
	PC5. identify sources, plan and organize farmers for intelligent (timely, quality, and appropriate cost- based) procurement of inputs				
	<i>Assist in maintaining the record of farmer meeting/farm school activities</i>	5	-	-	5
	PC6. keep the record that can help make farmer meeting and farm school activities 'targeted' and 'need based'				
	<i>Use of mobile and other technology for extension/client education</i>	5	-	-	3
	PC7. use modern communication devices, audio- visual aids to explain farmers/clients				
AGR/N4808: Assisting in veterinary extension services	Total Marks	60	30	-	10
AGR/N4810: Development program implementation and marketing in the livestock sector	<i>Facilitate implementation of government / private development programs including livestock insurance</i>	10	13	-	7
	PC1. promote awareness of programs and help in targeted beneficiary selection as envisioned in the project/program				

	PC2. work with selected project beneficiaries in implementing activities as envisaged in promoted programs				
	PC3. practice ear tagging in livestock and register animal for insurance				
	<i>Engagement with 'farmers' institutions and local self- government (Panchayat)</i>	5	10	-	5
	PC4. attend and support during meeting/programs of farmer's institutions/panchayats				
	PC5. inform/involve farmer leaders/panchayat functionaries in the selection of program beneficiaries				
	PC6. facilitate organization's panchayat endeavor to ensure convergence of development projects for synergy				
	<i>Facilitate agri-livestock related economic activity of self-help groups</i>	10	5	-	10
	PC7. support and handhold formation of self-help groups				
	PC8. guide farmers on business options and basic economics of various livestock-linked activities				
	PC9. maintain a conducive environment for all the genders and Persons with Disabilities (PwD)				
	<i>Facilitate marketing of livestock farm inputs / products</i>	5	12	-	8
	PC10. support farmers to produce for market and ensure aggregation, collective marketing of livestock products				
	PC11. deliver market-related e.g. prices, etc. information to farmers				
	PC12. generate information on livestock farm inputs e.g. feed, fodder, supplements, etc.				
	PC13. ensure equal participation of people across the genders and PwD in farmer's groups				
	Total Marks	30	40	-	30
AGR/N4820: Implementation of cattle Breeding Services	<i>Maintaining database of good cattle breeders</i>	2	2	-	2
	PC1. help farmers/clients with information on sources of good breeding animals				
	<i>Assistance to farmers in quality cattle selection / purchase.</i>	5	3	-	2
	PC2. assist farmers/clients in selecting animals with the proper breed and other characteristics for breeding purposes				
	<i>Animal identification and data recording</i>	8	9	-	-
	PC3. restrain the animal appropriately				
	PC4. perform tagging of animals as per standard protocol				
	PC5. use field data collection tools (including electronic/mobile mobile-based data collection) as per the given specifications				
	<i>Conducting artificial insemination</i>	11	13	-	6

PC6. recognize heat in cattle				
PC7. use semen of appropriate quality and blood level				
PC8. Follow protocols pertaining to biosecurity, safety, hygiene, and welfare				
PC9. follow the prescribed procedures in handling semen straw, and in conducting insemination				
PC10. practice artificial insemination in time				
<i>Assistance to farmers on management of unproductive animals.</i>	4	3	-	3
PC11. explain farmers/clients appropriate feeding practices required for breeding animals e.g. Mineral supplementation etc.				
PC12. guide farmers on maintaining an optimum number of animals based on breeding plan and suggest performance goal				
<i>Post insemination data recording and performance monitoring of breeding services</i>	-	7	-	3
PC13. use field data collection tools (including electronic reader / mobile based data collection) as per given specifications				
PC14. provide organization with standard required information such as semen used; time of heat, time of insemination, calf born etc., needed to monitor breeding services				
<i>Essential preventive health support to breeding animals</i>	4	7	-	6
PC15. demonstrate a high rate of voluntary compliance with bio-security norms within a farm				
PC16. evaluate procedure for procurement/infrastructure for storage etc.and use of vaccines from appropriate source only				
PC17. ensure cold chain and compliance with other guidelines during transport of vaccines to farmer's/clients' place and point of use				
PC18. rotate vaccine stock in hand so that the oldest vaccines are used first, ensuring that no vaccine is used after the expiration date				
PC19. comply all scientific guidelines related to vaccine administration procedure, e.g., use of appropriate dose, use of separate syringe for different vaccines, etc.				
PC20. ensure the record of a given vaccine and administration-related information (individual/herd level) along with batch numbers etc., as per the given format				

	PC21. timely report vaccine failure to appropriate authority as per format				
	PC22. ensure herd coverage and continuity of vaccination program				
	PC23. describe preventive de-worming and ecto parasite control as per the SOP approved by the organization				
	Total Marks	34	44	-	22
DGT/VSQ/N0102: Employability Skills (60 Hours)	<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	-	-
	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 compute income, expenses, taxes, investments etc				
PC19. identify relevant rights and laws and use legal aids 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		178	193		77

Annexure 6: 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.

1. Assessment System Overview

In Agriculture Sector it is of ultimate importance that individuals dealing with crop production or livestock have the requisite knowledge and competencies to undertake the task. Based on the Assessment Criteria, SSC in association with empanelled AAs, define the test structure for the given job roles to cover the required skills and competencies. Assessment strategy consists of the following:

1. Multiple Choice Questions : To assess basic knowledge (Objective/Subjective)
2. Viva : To assess awareness on processes (Oral and/or written questioning)
3. Practical : To evaluate skills and identify competencies.(Observation)

Assessments for knowledge and awareness on processes may be conducted through 'real time' internet based evaluation or by conducting the same 'offline' through TABs. Skills and competencies are to be assessed by conducting 'practical' on ground through qualified and ToA certified assessors.

While it is important that an individual has adequate knowledge and skills to perform a specific task, weight age for different aspects for assessment are given as follows:

Multiple Choice Questions: 20%-30%, depending on the specific QP

Viva: 20%

Practical: 50% - 60% (Involves demonstrations of applications and presentations of procedures/tasks and other components)

Assessment will be carried out by certified assessors through empanelled assessment partners. Based on the results of assessment; ASCI will certify the learners/candidates

2. Testing Environment

Assessments are conducted on laptops, Mobiles and android tablets via both offline and online mode depending on the internet connectivity at assessment location.

In remote locations/villages, assessments get delivered through tablets without the requirement of Internet.

- Multilingual assessments (ASCI is conducting assessments in 13 + languages pan India)
- Rubric driven assessments in Practical/Viva sections and responses recorded accordingly
- All responses, data, records and feedback stored digitally on cloud
- Advanced auto-proctoring features – photographs, time-stamp, geographic-tagging, toggle-screen/copy-paste disabled, etc.
- Android based monitoring system
- End to end process from allocation of a batch to final result upload, there is no manual intervention
- Assessment will normally be fixed for a day after the end date of training / within 7 days of completion of training.
- Assessment will be conducted at the training venue
- Room where assessment is conducted will be set with proper seating arrangements with enough space to curb copying or other unethical activities
- Question bank of theory and practical will be prepared by ASCI /assessment agency and approved ASCI. Only from approved Question Bank assessment agency will prepare the question paper. Theory testing will include multiple choice questions, pictorial question, etc. which will test the trainee on his theoretical knowledge of the subject.
- The theory, practical and viva assessments will be carried out on same day. In case of more number of candidates, number of assessors and venue facilitation be increased and facilitated

Assessment			
Assessment Type	Formative or Summative	Strategies	Examples
Theory	Summative	MCQ/Written exam	Knowledge of facts related to the job role and functions. Understanding of principles and concepts related to the job role and functions
Practical	Summative	Structured tasks/Demonstration	Practical application /Demonstration /Application tasks

Viva	Summative	Questioning and Probing	Mock interviews on usability of job roles/advantages /importance of adherence to procedures. Viva will be used to gauge trainee's confidence and correct knowledge in handling job situation
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The question paper pre-loaded in the computer /Tablet and it will be in the language as requested by the training partner.

3. Assessment Quality Assurance framework

Assessment Framework and Design:

Based on the Assessment Criteria, SSC in association with AAs will define the test structure for the given roles to cover the required skills and competencies. ASCI offer a bouquet of tools for multi- dimensional evaluation of candidates covering language, cognitive skills, behavioral traits and domain knowledge.

Theoretical Knowledge - Item constructs and types are determined by theoretical understanding of the testing objectives and published research about the item-types and constructs that have shown statistical validity towards measuring the construct. Test item types which have been reported to be coachable are not included. Based on these, items are developed by domain experts. They are provided with comprehensive guidelines of testing objectives of each question and other quality measures.

Type – Questions based on Knowledge Required, Case-based practical scenario questions and automated simulation based questions.

Practical Skills - The practical assessments are developed taking into consideration two aspects: what practical tasks is the candidate expected to perform on the job and what aspects of the job cannot be judged through theoretical assessments. The candidates shall be asked to perform either an entire task or a set of subtasks depending on the nature of the job role

Type – Standardized rubrics for evaluation against set of tasks in a demo/practical task

Viva Voce - Those practical tasks which cannot be performed due to time or resource constraints are evaluated through the viva mode. Practical tasks are backed up with Viva for thorough assessment and complete evaluation

Type – Procedural questions, do's and don'ts, subjective questions to check understanding of practical tasks.

Assessor has to go through orientation program organized by Assessment Agency. The training would give an overview to the assessors on the overall framework of QP evaluation. Assessor shall be given a NOS and PC level overview of each QP as applicable. Overall structure of assessment and objectivity of the marking scheme will be explained to them. The giving of marks will be driven by an objective framework which will maintain standardization of marking scheme.

4. Type of Evidence and Evidence Gathering Protocol:

During the assessment the evidences collected by AAs and ASCI are:

- Geo Tagging to track ongoing assessment
- AA's coordinator emails the list of documents and evidences (photos and videos) to the assessor one day prior to the assessment. List is mentioned below:
 - Signed Attendance sheet
 - Assessor feedback sheet
 - Candidate feedback sheet
 - Assessment checklist for assessor
 - Candidate Aadhar/ID card verification
 - Pictures of classroom, labs to check the availability of adequate equipment's and tool to conduct the training and assessment
 - Pictures and videos of Assessment, training feedback and infrastructure.
- Apart from the Assessor, Technical assistant popularly known as Proctor also ensures the proper documentation and they verify each other's tasks.
- To validate their work on the day of assessment, regular calls and video calls are done.
- On-boarding and training of assessor and proctor is done on timely basis to ensure that quality of the assessment should be maintained.
- Training covers the understanding of QP, NSQF level, NOS and assessment structure

5. *Methods of Validation*

- Morning Check (Pre-Assessment): Backend team of AA calls and confirms assessor/technical spoc event status. Assessor/Technical spoc are instructed to reach the centre on time by 9:30 AM / as decided with TC and delay should be highlighted to the Training Partner in advance.
- Video Calls: Random video calls are made to the technical spoc/assessor so as to keep check on assessment quality and ensure assessment is carried out in fair and transparent manner
- Aadhar verification of candidates
- Evening Check (Post Assessment): Calls are made to the ground team to ensure event is over by what time and the documentation is done in proper manner or not.
- TP Calling: To keep check on malpractice activity, independent audit team calls to TP on recorded line to take confirmation if there was any malpractice activity observed in assessment on part of AA/SSC team. If calls are not connected, email is send to TP Spoc for taking their confirmation
- Video and Picture Evidence: Backend team collects video and pictures for assessment on real time basis and highlights any issue like, Students sitting idle/trainer allowed for helping out candidates during assessment.
- Surprise Visit: Time to time SSC/AA Audit team can visit the assessment location and do surprise audit for assessment process carried out by ground team.
- Geo Tagging: On day of assessment, each technical spoc is required to login in our internal app which is Geo tagged. Any deviation with centre address needs to be highlighted to assessment team on real-time basis.

Method for assessment documentation, archiving, and Access:

- ASCI has fully automated result generation process in association with multiple AAs

- Theory, Practical and Viva marks forms the basis of the results and encrypted files generated to avoid data manipulation. All responses captured and stored in System with Time-Stamped at the end of AAs and SSC. NOS-wise and PC-wise scores can be generated.
- Maker Checker concept: 1 person prepares results and other audit result which is internally approved by AA at first and then gets vetted at the end of SSC
- All soft copy of documents is received from the on-ground tech team over mail. The same are downloaded by our internal backend team and saved in Repository. The repository consists of scheme wise folders. These scheme wise folders have job role specific folders. These specific folders have Year wise and Month wise folders where all documents are saved in Batch specific folders. All Hard copies are filed and stored in storeroom.
- **Result Review & Recheck Mechanism –**
- Time stamped assessment logs
- Answer/Endorsement sheets for each candidate
- Attendance Sheet
- Feedback Forms: Assessor feedback form, Candidate feedback form, TP feedback form
- The results for each of the candidate shall be stored and available for review (retained for 5 years/ till conclusion of project or scheme)

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