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.

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Section 1: Basic Details

1.	**Qualification Name**	**Artificial Insemination Technician**	
2.	**Sector/s**	**Agriculture**	
3.	**Type of Qualification:** ☐ **New** ☒ **Revised** ☐ **Has Electives/Options** ☐ **OEM**	**NQR Code & version of existing qualification:** 2022/AGR/ASCI/06533 & Version 3.0	**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)*	QG-04-AG-03414-2024-V2-ASCI	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 Multipurpose Artificial Insemination Technician in rural India (MAITRIs), 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:**	

b. Age: 17

S. No.	Academic/Skill Qualification (with Specialization - if applicable)	Required Experience (with Specialization - if applicable)
1	12ᵗʰ or equivalent	
2	10th Class	3 Year of relevant experience in Agriculture and allied sectors or as pashu sakho/ Gopal Mitra/MAITRIs
3	Previous NSQF Level 3.5	1.5 Year of relevant experience in Agriculture and allied sectors or as pashu sakho/ Gopal Mitra/MAITRIs
4	Previous NSQF Level 3.0	3 Year of relevant experience in Agriculture and allied sectors or as pashu sakho/ Gopal Mitra/MAITRIs

10.	Credits Assigned to this Qualification, Subject to Assessment (as per National Credit Framework (NCrF))	Min: 13 Max: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)	170	160	60		390
Online					

(Refer Blended Learning Annexure for details)

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), Artificial Insemination Supervisor (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**	☐ 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:** *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)*	☒ Yes ☐ No DGT/VSQ/N0102 (v1.0)
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: Mr Srikanth Pampana** **Email: Standards@asci-india.com** **Contact No.: 0124-4670029** **Website: www.asci-india.com**
23.	**Final Approval Date by NSQC**: 26-11-2024	**24. Validity Duration: 3 years post NSQC Approval** **25. Next Review Date:** 26-11-2027

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	Implementation of cattle breeding services	AGR/N4820 (v3.0)	Core	4	6	80	100			180	31	51		18	100	50
2	Provide veterinary first-aid (AIT)	AGR/N4829 (v1.0)	Core	4	1	10	20			30	38	40		22	100	20
3	Assisting in veterinary extension services	AGR/N4808 (v3.0)	Core	4	2	20	40			60	55	33		12	100	25
4	Employability skills (60 Hours)	DGT/VSQ/N 0102 (v1.0)	Non-Core	4	2	60				60	20	30			50	5
5	OJT				2			60		60						
Duration (in Hours) / Total Marks					13	170	160	60		390	144	154		52	350	100

Optional NOS/s: Program implementation and marketing in the livestock sector

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.	Facilitate program implementation and marketing in the livestock sector	AGR/N4810 (v4.0)	Core	4	1	20	10			30	30	40		30	100	25
Duration (in Hours) / Total Marks					1	20	10			30						

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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)** *(as per NCVET guidelines)*	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)** *(as per NCVET guidelines)*	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**	☒Yes ☐No (*If "Yes", details to be provided in Annexure*)
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)** *(as per NCVET guidelines)*	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

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		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)** *(as per NCVET guidelines)*	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)** *(as per NCVET guidelines)*	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** *(Specify the assessment mode)*	**Offline**
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):** No
3.	**Government /Industry initiatives/ requirement (Yes/No):** Yes, Government Initiative, part of PMKVY 4.0
4.	**Number of Industry validation provided:** 5
5.	**Estimated nos. of persons to be trained and employed:** 2000
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 *(Mandatory)*	*Annexure-1*
2.	**Annexure:** List of tools and equipment relevant for qualification *(Mandatory, except in case of online course)*	*Annexure-2*
3.	**Annexure:** Detailed Assessment Criteria *(Mandatory)*	*Annexure-5*
4.	**Annexure:** Assessment Strategy *(Mandatory)*	*Annexure-6*
5.	**Annexure:** Blended Learning *(Mandatory, in case selected Mode of delivery is "Blended Learning")*	*NA*

6.	**Annexure:** Multiple Entry-Exit Details *(Mandatory, in case qualification has multiple Entry-Exit)*	*NA*
7.	**Annexure:** Acronym and Glossary *(Optional)*	
8.	**Supporting Document:** Model Curriculum *(Mandatory – Public view)*	*Annexure-7*
9.	**Supporting Document:** Career Progression *(Mandatory - Public view)*	*Artificial Insemination Supervisor (L5)*
10.	**Supporting Document:** Occupational Map *(Mandatory)*	*Annexure-8*
11.	**Supporting Document:** Assessment SOP *(Mandatory)*	*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	- 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	- 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	- 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	- Pre-preparation of artificial insemination - Animal Breeding Management	In order to correctly perform the tasks related to selection of animal, pre preparation of artificial insemination, breeding, management in the outdoor	4

	• Basic arithmetic skills	settings, individual requires communication skills with required clarity, basic arithmetic skills, personal banking and basic understanding of social, political and natural environment.	
Responsibility	• 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	Artiificial Insemination Guns	Nos	2
13	Cryocan cylinder	Nos	2
14	Face Masks	Nos	30
15	AI lubricant (Exluding Soap or deteregent which is a spermicides)	Nos	2

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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	KVK Datia	Dr Awdhesh Singh	Senior Scientist & Head	Datia	9399935960	Kvk.datia@rvskvv.net	
2	KVK Gwalior	Dr Shailendra Singh Kushwah	Senior Scientist & Head	Gwalior	7067840763	Kvk.gwalior@rvskvv.net	
3	KVK Parbhani	Dr Imran Khan Aghai	Scientist (Animal Science)	Parbhani	9890016696	Kvkpbn94@yahoo.co.in	
4	KVK Sangvi	Mr. Wasudeo. Y. Chandurkar	SMS (Extension	Sangvi	7972162867	vasudeoextn@gmail.com	
5	KVK Golaghat	Dr Bhabesh Chandra Deka	Senior Scientist & Head	Golaghat	9435340387	Kvk_goalghat@aau.ac.in	

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		

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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
V3.0	2021-24	1592											

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
2. 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/N4820: Implement cattle Breeding Services	*Maintaining database of good cattle breeders*	2	2		2
	PC1. help farmers/clients with information on sources of good breeding animals				
	Assistance to farmers in quality cattle selection/purchase	5	3	-	2
	PC2. assist farmers/clients in selecting animals with the proper breed and other characteristics for breeding purposes				
	Animal identification and data recording	4	8	-	-
	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				
	Conducting artificial insemination	10	20	-	5
	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				
PC11 follow-up cases and conduct pregnancy diagnosis				
Assistance to farmers on management of unproductive animals.	2		-	2
PC12. explain farmers/clients appropriate feeding practices required for breeding animals e.g. Mineral supplementation etc.				
PC13. guide farmers on maintaining an optimum number of animals based on breeding plan and suggest performance goal				
Post insemination data recording and performance monitoring of breeding services	-	5	-	2
PC14. use field data collection tools (including electronic reader /mobile based data collection) as per given specifications				
PC15. provide organization with standard required information such as semen used; time of heat, time of insemination, calf born etc., needed to monitor breeding services				
Essential preventive health support to breeding animals	5	8	-	3
PC16. demonstrate a high rate of voluntary compliance with bio-security norms within a farm				
PC17. evaluate procedure for procurement/infrastructure for storage etc.and use of vaccines from appropriate source only				
PC18. ensure cold chain and compliance with other guidelines during transport of vaccines to farmer's/clients' place and point of use				
PC19. rotate vaccine stock in hand so that the oldest vaccines are used first, ensuring that no vaccine is used after the expiration date				
PC20. comply all scientific guidelines related to vaccine administration procedure, e.g., use of appropriate dose, use of separate syringe for different vaccines, etc.				
PC21. ensure the record of a given vaccine and administration-related information (individual/herd level) along with batch numbers etc., as per the given format				
PC22. timely report vaccine failure to appropriate authority as per format				
PC23. ensure herd coverage and continuity of vaccination program				

	PC24. describe preventive de-worming and ecto parasite control as per the SOP approved by the organization				
	Providing assistance in the management of bull stations/ semen production centres	3	5		2
	PC25. To be able to undertake the management of breeding bulls as per instructions.				
	PC26 prepare animals and assist in semen collection				
	PC27 assist in the routine maintenance of various common equipment in semen production centres				
	PC28 supervise storage, handling and distribution of semen straws				
	Total Marks	31	51	-	18
AGR/N4829: Provide Veterinary First Aid (AIT)	*Handling of non-infectious conditions like indigestion, anorexia, constipation, tympani, impaction, diarrhea etc.*	8	5		5
	PC1.　Identify the non-infectious condition and use commonly suggested medications / follow precautions as per the manual prepared by the supervisor				
	Provide immediate support to accidental situations like poisoning, sunstroke, electrocution, burn injuries, etc.	8	5		5
	PC2.　identify the cause of the accident from thesymptoms				
	PC3.　recognize the severity of the accident and suggest for consultation with a veterinarian				
	PC4.　provide primary/immediate care as specified for each type of accident as per SOP				
	Handling of superficial wounds and trauma	7	10		2
	PC5.　clean and protect the wound and stop bleeding				
	Provide support in reproductive emergencies	15	20		10
	PC.6 take needed precautions at the time of calving and use the naval kit for disinfection of naval cord.				
	PC7 recognize signs of dystocia early to seek appropriate help from a supervisor/veterinarian				
	PC8 provide resuscitation to newborn calves.				
	PC9. carry out aseptic handling and protection of the prolapsed organ(s) before the arrival of a veterinarian				
	Total Marks	38	40	-	22
AGR/N4808: Assist in veterinary extension services	*Promoting approved technology and best practices (including organic practices) in livestock farming, handling animal products*	30	18	-	2

	PC1. 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				
	Assist farmers on quality farm input selection and procurement	*10*	*10*	*-*	*2*
	PC4. 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				
	Engagement with community and delivery of sustainable services	*15*	*-*	*-*	*5*
	PC6. recognize how gender and other social factors impact management of animals				
	PC7. follow various related development programs ongoing within the community and contribute meaningfully to such programs.				
	PC8. prepare and support community and individual farmers to face disasters.				
	PC9. apply basic principles of management needed for sustainable delivery of services within a community				
	PC10. network with various people and associations within profession, community and in livestock business				
	Use of mobile and other technology for extension/client education		*5*		*3*
	PC11. use modern communication devices, audio-visual aids to explain farmers/clients				
	Total Marks	55	33		12
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*	*-*	*-*

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	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				
	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 ofline 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				
	Essential Digital Skills	3	4	-	-
	PC20. operate digital devices and carry out basic internet operations securely and safely				

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	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 ofline and online sources such as Employment exchange, recruitment agencies, newspapers etc. and job portals, respectively				
	PC31. apply to identified job openings using ofline/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				
AGR/N4810 Facilitate program implementation and marketing in the livestock sector	*Facilitate implementation of government / private development programs including livestock insurance*	*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				
	Engagement with 'farmers' institutions and local self- government (Panchayat)	*5*	*10*		*5*

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	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 convergence of development projects for synergy				
	Facilitate agri-livestock related economic activity of self-help groups	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				
	Facilitate marketing of livestock farm inputs / products	5	12		8
	PC9. support farmers to produce for market and ensure aggregation, collective marketing of livestock products				
	PC10. deliver market-related e.g. prices, etc. information to farmers				
	PC11. promote use of quality livestock farm inputs				
	Total Marks	30	40	-	30

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:

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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

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 jobrole

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:
  o Signed Attendance sheet
  o Assessor feedback sheet
  o Candidate feedback sheet
  o Assessment checklist for assessor
  o Candidate Aadhar/ID card verification
  o Pictures of classroom, labs to check the availability of adequate equipment's and tool to conduct the training and assessment
  o 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

- <u>Morning Check (Pre-Assessment)</u>: 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.
- <u>Video Calls</u>: 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
- <u>Aadhar verification</u> of candidates
- <u>Evening Check (Post Assessment)</u>: 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.
- <u>TP Calling</u>: 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
- <u>Video and Picture Evidence</u>: 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.
- <u>Surprise Visit</u>: Time to time SSC/AA Audit team can visit the assessment location and do surprise audit for assessment process carried out by ground team.
- <u>Geo Tagging</u>: 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

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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-Stamps 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

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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

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