Qualification Code
QG-05-AG-00313-2023-V1.1-ASCI

CONTACT DETAILS OF THE BODY SUBMITTING THE QUALIFICATION FILE

Name and address of submitting body:

Agriculture Skill Council of India (ASCI)
6th floor, GNG Building, Plot No – 10, Sector- 44,
Gurugram, Haryana – 122004

Name and contact details of individual dealing with the submission

Name: Ms. Priyanka Prakash

Position in the organisation: Senior Manager – Standards & QA

Address, if different from above

Tel number(s): 0124 – 4670029/ 4814673/ 4814659

E-mail address: priyanka@asci-india.com

List of documents submitted in support of the Qualifications File

1. Qualifications Pack – Annexure 1
2. Model Curriculum – Annexure 2
3. Affiliation Protocol- Annexure 3
4. Industry Validations- Annexure 4

Model Curriculum to be added which will include the following:

- **Indicative list of tools/equipment to conduct the training**
- **Trainers qualification**
- **Lesson Plan**
- **Distribution of training duration into theory/practical/OJT component**

- **SUMMARY**

1	**Qualification Title**	Aquaculture Technical Supervisor
2	**Qualification Code, if any**	AGR/Q4903, v3.0
3	**NCO code and occupation**	NCO-2015/6221
4	**Nature and purpose of the qualification (Please specify whether qualification is short term or long term)**	Nature of the qualification - a Qualification Pack (QP) The main purpose of the qualification is - - to train the incumbent for ensuring the preparation of the pond for aquaculture, maintaining a healthy growth of the cultured species and harvesting them using the recommended methods. The person may also use the Biofloc and Recirculating Aquaculture System (RAS) technologies.
5	**Body/bodies which will award the qualification**	Agriculture Skill Council of India (ASCI)
6	**Body which will accredit providers to offer courses leading to the qualification**	Agriculture Skill Council of India (ASCI)
7	**Whether accreditation/affiliation norms are already in place or not, if applicable (if yes, attach a copy)**	Yes (Annexure 3)
8	**Occupation(s) to which the qualification gives access**	Aquaculture
9	**Job description of the occupation**	An Aquaculture Technical Supervisor (Also Known as Aquaculture Technician) is responsible for ensuring the preparation of the pond for aquaculture, maintaining a healthy growth of the cultured species and harvesting them using the recommended methods. The person may also use the Bio floc and Recirculating Aquaculture System (RAS) technologies.
10	**Licensing requirements**	NA
11	**Statutory and Regulatory requirement of the relevant sector (documentary evidence to be provided)**	NA

12	**Level of the qualification in the NSQF**	Level 5
13	**Anticipated volume of training/learning required to complete the qualification**	Minimum Duration: 480 hours (Theory: 90, Practical: 180, ES: 90, OJT: 120) Maximum Duration: 600 hours (Theory: 90, Practical: 180, ES: 90, OJT: 120, Two optional NOS of 60 Hours duration each)
14	**Indicative list of training tools required to deliver this qualification**	Attached herewith
15	**Entry requirements and/or recommendations and minimum age**	Minimum Educational Qualification: Completed 2nd year of UG OR Pursuing 2nd year of UG and continuous education OR Completed 2nd year of diploma (after 12th) OR Pursuing 2nd year of 2-year diploma after 12th OR 12th pass with 1-year Vocational Education & training (NTC or NAC or CITS) OR Completed 3-year diploma after 10th with 1-year relevant experience OR 12th Grade pass with 2- year relevant experience OR 10th Grade pass with 4-year relevant experience OR Previous relevant Qualification of NSQF Level 4 and with minimum education as 8th Grade pass with 3-year relevant experience OR Previous relevant Qualification of NSQF Level 4.5 with 1.5- year relevant experience Min Age: 18 years
16	**Progression from the qualification (Please show Professional and academic progression)**	Hatchery Manager (L6)
17	**Arrangements for the Recognition of Prior learning(RPL)**	RPL assessment will be as per normal ASCI assessment process. (ASCI recognizes that there may be candidates who have prior learning experience in the Agriculture Sector and are desirous of being certified. Such candidates

		can apply to ASCI for testing and certification of their skills. Training Partners will be responsible for identifying and counselling candidates for RPL through mobilization camps and advertisements. The details of the RPL process have been defined by ASCI under the document- Guidelines for Recognition of Prior Learning under PMKVY).		
18	**International comparability where known (research evidence to be provided)**	Not done as yet		
19	**Date of planned review of the qualification.**	20-12-2024		
20	**Formal structure of the qualification Mandatory components**			
	Title of component and identification code/NOSs/Learning outcomes	**Estimated size (learning hours) Theory**	**Practical**	**Level**
(i)	Introduction (Bridge Module)	5	0	
(ii)	AGR/N4916: Undertake the pond preparation activities	25	60	**5**
(iii)	AGR/N4917: Carry out aquaculture operations	30	60	
(iv)	AGR/N4918: Ensure health, hygiene and safety during culture operations	30	60	
(v)	DGT/VSQ/N0103: Employability Skills (90 Hours) v1.0	90		
	TOTAL	**180**	**180**	
	OJT	**120 Hours**		
	Optional Modules			
(I)	AGR/N4959: Culture fish using the biofloc technology	20	40	
(Ii)	AGR/N4960: Set up and use the recirculating aquaculture system	20	40	

SECTION 1
ASSESSMENT

21	**Body/Bodies which will carry out assessment:** ASCI affiliated assessment bodies. 1. SHL India (Pvt.) Ltd 2. Trendsetters Skill Assessors Pvt Ltd 3. Mercer-Mettl 4. SP Institute of Workforce Development(SPIWD) 5. MSAG SI LLP More Assessment Agencies are being empanelled to cover wider geographical area
22	**How will RPL assessment be managed and who will carry it out?** RPL will be based on the same approved Qualification Pack and Assessment Criteria mentioned in the Qualification Pack and will be carried out as per normal ASCI assessment process. The Training Partner or any other authority as prescribed by the Steering Committee will identify and counsel candidates eligible for RPL through mobilization camps and advertisements. The mobilized candidates can be counselled, oriented about the standardized NSQF framework and basis their existing competency will be mapped against the suitable level of the concerned Job role for assessments. The candidates enrolled will be assessed by the Assessment Agency affiliated with the Sector Skill Council on the basis of assessment criteria decided by Sector Skill Council (SSC). The candidate will need to pass in the minimum assessment criteria of a particular QP decided by the SSC. Successfully assessed candidates with a valid Aadhaar or alternate ID (as per process) will be eligible for QP-NOS based Certification.
23	**Describe the overall assessment strategy and specific arrangements which have been put in place to ensure that assessment is always valid, reliable and fair and show that these are in line with the requirements of the NSQF.** A robust technology enabled assessment methodology has been designed keeping in mind the geographical/Physical constraints and target segment which assess a trainee's knowledge and skill set through three methods: a. An offline Tablet based test through the use of Multiple Choice Text and Picture based questions in vernacular languages b. Actual demonstration on the field c. Viva

	ASCI's assessment strategy: ● Question sets are developed as per the weightage of each NOS of the Qualification Pack. ● Assessment criteria for each Qualification Pack developed, in which each Performance criteria (PC) assigned marks based on NOS ● Question Bank is developed to assess the theoretical and practical knowledge. To ensure the quality, each trainees get different set of question ● Empanelment of subject matter expert as assessor primarily from the Industry to assess trainee specifically on practical skills as per Industry demands Assessments are preferably conducted on tablets or pen or papers in regional languages according to the requirement.

Please attach most relevant and recent documents giving further information about assessment and/or RPL.
Give the titles and other relevant details of the document(s) here. Include page references showing where to find the relevant information.

ASSESSMENT EVIDENCE

Complete a grid for each component as listed in "Formal structure of the qualification" in the Summary.

NOTE: this grid can be replaced by any part of the qualification documentation which shows the same information – i.e. Learning Outcomes to be assessed, assessment criteria and the means of assessment.

24. Assessment evidences
Title of Component:

Outcomes to be assessed/ NOSs to be assessed	**Assessment criteria for the outcome**
Means of assessment 1	
Pass/Fail	

Job Role: Aquaculture Technical Supervisor

Qualification Pack: AGR/Q4903, v3.0

Sector Skill Council: Agriculture Skill Council of India

Assessment Guidelines:

1. Criteria for assessment for each Qualification Pack will be created by the Sector SkillCouncil. Each Performance Criteria (PC) will be assigned marks proportional to its importance in NOS. SSC will also lay down proportion of marks for Theory and SkillsPractical for each PC.
2. The assessment for the theory part will be based on knowledge bank of questionscreated by the SSC.
3. Assessment will be conducted for all compulsory NOS, and where applicable, on theselected elective/option NOS/set of NOS.
4. Individual assessment agencies will create unique question papers for theory part for each candidate at each examination/training center (as per assessment criteria below).
5. Individual assessment agencies will create unique evaluations for skill practical for everystudent at each examination/training center based on this criterion.
6. To pass the Qualification Pack, every trainee should score a minimum of 70% ofaggregate marks to successfully clear the assessment.
7. In case of unsuccessful completion, the trainee may seek reassessment on the Qualification Pack.

AGR/N4916: Undertake the pond preparation activities					
PC	**Assessment Criteria for Outcomes**	**Theory Marks**	**Practical Marks**	**Project Marks**	**Viva Marks**
Prepare the pond for aquaculture		**12**	**16**		**12**
PC1.	collect a soil sample from the bottom of the pond	-	-	-	-
PC2.	co-ordinate with an authorised lab to test the level of organic matters and pH in the soil	-	-	-	-
PC3.	instruct the workers to apply basal manure, lime, gypsum or any other necessary soil treatment in the recommended quantity to improve the soil fertility as advised by the lab	-	-	-	-
PC4.	arrange for de-mudding to be carried out in the pond	-	-	-	-
PC5.	instruct the workers to drain out and sun-dry the perennial pond	-	-	-	-

PC6.	arrange for dykes of recommended height to be constructed at the pond	-	-	-	-
PC7.	ensure inlet and outlet pipes are installed in the pond for efficient entry and exit of the water	-	-	-	-
PC8.	ensure the aquatic weed is removed from the pond	-	-	-	-
PC9.	arrange for the water to be treated with appropriate treatment such as chlorine and stored in the reservoir	-	-	-	-
PC10.	ensure the reservoir and culture pond are filled with the required level of water	-	-	-	-
PC11.	instruct the workers to use the appropriate Personal Protective Equipment (PPE) while applying chemicals in the pond	-	-	-	-
	Carry out pre-stocking and stocking activities	**10**	**12**	**-**	**8**
PC12.	select the appropriate methods to eradicate predatory and weed fish from the pond	-	-	-	-
PC13.	select an appropriate method to apply lime and recommended fertilizers in the pond at different stages of culture operations	-	-	-	-
PC14.	arrange for the appropriate treatment to be applied for controlling aquatic insects before seed stocking	-	-	-	-
PC15.	arrange for acclimatisation of seeds before stocking	-	-	-	-
PC16.	instruct the workers to stock the seeds maintaining the recommended density, depth and species ratio for the species to be cultured	-	-	-	-
	Optimise resource utilisation	**8**	**12**	**-**	**10**
PC17.	follow the recommended practices to reduce the loss of water from the culture pond	-	-	-	-
PC18.	apply lime or the approved disinfectant to treat the wastewater for recycling	-	-	-	-
PC19.	check the quality parameters of the treated water for its suitability for re-use	-	-	-	-
PC20.	utilise the recycled water for the appropriate culture practices	-	-	-	-
PC21.	optimise the usage of electricity and materials in various tasks/ activities/ processes	-	-	-	-
PC22.	connect the electrical tools and equipment safely and turn off when not in use	-	-	-	-
NOS Total		**30**	**40**		**30**
AGR/N4917: Carry out aquaculture operations					
Carry out post-stocking activities		**6**	**6**		**4**
PC1.	arrange for appropriate type and dosage of manure, fertilizer and lime to be applied in the pond	-	-	-	-

PC2.	ensure periodic sampling of the soil, water and fish	-	-	-	-
PC3.	perform netting for efficient management of the crop	-	-	-	-
PC4.	ensure aeration and water replenishment in the culture pond at the recommended intervals	-	-	-	-
	Perform nutrient management	**4**	**8**		**6**
PC5.	Identify the feed requirement of the cultured species at various stages of their growth	-	-	-	-
PC6.	procure the prepared feed or the feed ingredients to prepare the feed in a timely manner	-	-	-	-
PC7.	determine the dose of supplementary feed and instruct the workers to carry out split feeding as per the requirement	-	-	-	-
PC8.	ensure the stocked culture species are fed with wet feed/ floating feed/ pellets containing the required nutrients such as protein and supplementary feed ingredients	-	-	-	-
PC9.	check that the recommended feeding schedule for different culture species is followed	-	-	-	-
PC10.	identify rancidity in feed and arrange for rancid feed to be disposed appropriately	-	-	-	-
	Perform disease management	**4**	**6**		**4**
PC11.	implement the recommended preventive and prophylactic measures in the culture pond	-	-	-	-
PC12.	check the pond to identify diseased or dying fish	-	-	-	-
PC13.	diagnose the problem/disease and consult a specialist for a solution	-	-	-	-
PC14.	instruct the workers to separate the diseased fish from the healthy fish and put them in a quarantine tank to prevent disease outbreak	-	-	-	-
PC15.	follow the recommended therapeutic practices based on the type and severity of disease/ infection	-	-	-	-
PC16.	monitor the condition of fish in the quarantine tank for signs of improvement	-	-	-	-
	Supervise harvesting and post-harvest management	**8**	**6**		**8**
PC17.	check the fish stocked in the pond to identify its maturity	-	-	-	-
PC18.	select an appropriate time to harvest the cultured fish	-	-	-	-
PC19.	instruct the workers to use nets of appropriate mesh size to harvest the cultured fish	-	-	-	-
PC20.	follow the recommended method for partial/ complete harvesting	-	-	-	-

PC21.	arrange for the harvested stock to be stored at the recommended temperature, Relative Humidity (RH) and hygienic conditions	-	-	-	-
PC22.	follow the recommended practices to ensure minimum handling of the stock between harvesting and transportation	-	-	-	-
PC23.	arrange for the harvested fish to be stored in appropriate containers/ tanks for transportation, ensuring minimum stress during transit	-	-	-	-
	Perform waste management	**4**	**6**		**4**
PC24.	segregate waste into appropriate categories	-	-	-	-
PC25.	ensure that non-recyclable waste is disposed appropriately	-	-	-	-
PC26.	arrange for the recyclable and reusable materials to be recycled	-	-	-	-
	Promote inclusion at work	**4**	**8**		**4**
PC27.	ensure a conducive environment for all the genders at the work	-	-	-	-
PC28.	encourage appropriate behaviour and conduct with people across genders	-	-	-	-
PC29.	ensure appropriate verbal and non-verbal communication while interacting with Persons with Disabilities (PwD)	-	-	-	-
PC30.	ensure equal participation of people across genders in discussions	-	-	-	-
	NOS TOTAL	**30**	**40**		**30**
	AGR/N4918: Ensure health, hygiene and safety during culture operations				
	Ensure the upkeep of water body, tools and equipment	**10**	**12**		**8**
PC1.	ensure the necessary practices are followed to protect the aquaculture farm and dykes from erosion and natural calamities such as flood and storms	-	-	-	-
PC2.	ensure protection of the cultured organisms from water/ air/ fomite borne diseases and contamination from handling	-	-	-	-
PC3.	identify and eliminate common predators and preying organisms from the water body	-	-	-	-
PC4.	ensure fences are erected to protect the water body from external threats	-	-	-	-
PC5.	restrict the entry of unauthorised persons into the aquaculture area	-	-	-	-
PC6.	follow the recommended practices to prevent the escape of cultured organisms from the culture pond/ tank	-	-	-	-

PC7.	conduct regular tests to ensure the appropriate soil and water quality parameters are maintained in the water body	-	-	-	-
PC8.	ensure all the nets, vessels, tools and equipment are cleaned and de-contaminated regularly	-	-	-	-
	Maintain personal hygiene and safety	**10**	**12**		**12**
PC9.	ensure basic safety checks are undertaken before the operation of any tools and equipment	-	-	-	-
PC10.	ensure the use of relevant Personal Protective Equipment (PPE) during various aquaculture operations	-	-	-	-
PC11.	follow the standard procedures to deal with accidents and emergencies	-	-	-	-
PC12.	use the first-aid kit to provide appropriate treatment in case of any injuries	-	-	-	-
PC13.	co-ordinate with the emergency services for further medical attention	-	-	-	-
	Maintain the health of cultured organisms	**10**	**16**		**10**
PC14.	follow the recommended prophylactic measures and ensure hygienic conditions during all the stages of growth of the cultured organisms	-	-	-	-
PC15.	examine the cultured organisms regularly to detect the symptoms of parasites, pathogenic infections, phenotypic disorders, etc.	-	-	-	-
PC16.	ensure the necessary medicines/ chemicals are applied as per prescription, maintaining the toxicity levels within the prescribed limits	-	-	-	-
PC17.	use the recommended therapeutic practices in combination with the prescribed treatment for the speedy recovery of the diseased organisms	-	-	-	-
PC18.	identify a quarantine area and arrange for the diseased organisms to be quarantined and treated	-	-	-	-
PC19.	co-ordinate with an expert to deal with unexpected disease outbreak among the cultured organisms	-	-	-	-
PC20.	ensure timely removal of the dead and moribund organisms from the water body	-	-	-	-
PC21.	arrange for safe disposal of the dead and diseased organisms	-	-	-	-
	NOS Total	**30**	**40**		**30**

DGT/VSQ/N0103: Employability Skills (90 Hours)				
Introduction to Employability Skills	1	1	-	-
PC1. understand the significance of employabilityskills in meeting the current job market requirement and future of work	-	-	-	-
PC2. identify and explore learning and employability relevant portals	-	-	-	-
PC3. research about the different industries, jobmarket trends, latest skills required and the available opportunities	-	-	-	-
Constitutional values – Citizenship	1	1	-	-
PC4. recognize the significance of constitutional values, including civic rights and duties, citizenship, responsibility towards society etc. andpersonal values and ethics such as honesty, integrity, caring and respecting others, etc.	-	-	-	-
PC5. follow environmentally sustainable practices	-	-	-	-
Becoming a Professional in the 21st Century	1	3	-	-
PC6. recognize the significance of 21st CenturySkills for employment	-	-	-	-
PC7. 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	-	-	-	-
PC8. adopt a continuous learning mindset forpersonal and professional development	-	-	-	-
Basic English Skills	3	4	-	-
PC9. use basic English for everyday conversationin different contexts, in person and over the telephone	-	-	-	-
PC10. read and understand routine information, notes, instructions, mails, letters etc. written in English	-	-	-	-
PC11. write short messages, notes, letters, e-mails etc. in English	-	-	-	-
Career Development & Goal Setting	1	2	-	-
PC12. identify career goals based on the skills, interests, knowledge, and personal attributes	-	-	-	-
PC13. prepare a career development plan with short- and long-term goals	-	-	-	-
Communication Skills	2	2	-	-

PC14. follow verbal and non-verbal communication etiquette while communicating in professional and public settings	-	-	-	-
PC15. use active listening techniques for effective communication	-	-	-	-
PC16. communicate in writing using appropriate style and format based on formal or informal requirements	-	-	-	-
PC17. work collaboratively with others in a team	-	-	-	-
Diversity & Inclusion	1	1	-	-
PC18. communicate and behave appropriately with all genders and PwD	-	-	-	-
PC19. escalate any issues related to sexual harassment at workplace according to POSH Act	-	-	-	-
Financial and Legal Literacy	2	3	-	-
PC20. identify and select reliable institutions for various financial products and services such as bank account, debit and credit cards, loans, insurance etc.	-	-	-	-
PC21. carry out offline and online financial transactions, safely and securely, using various methods and check the entries in the passbook	-	-	-	-
PC22. identify common components of salary and compute income, expenses, taxes, investments etc	-	-	-	-
PC23. identify relevant rights and laws and use legal aids to fight against legal exploitation	-	-	-	-
Essential Digital Skills	3	5	-	-
PC24. operate digital devices and use their features and applications securely and safely	-	-	-	-
PC25. carry out basic internet operations by connecting to the internet safely and securely, using the mobile data or other available networks through Bluetooth, Wi-Fi, etc.	-	-	-	-
PC26. display responsible online behaviour while using various social media platforms	-	-	-	-
PC27. create a personal email account, send and process received messages as per requirement	-	-	-	-
PC28. carry out basic procedures in documents, spreadsheets and presentations using respective and appropriate applications	-	-	-	-
PC29. utilize virtual collaboration tools to work effectively	-	-	-	-
Entrepreneurship	2	3	-	-
PC30. identify different types of Entrepreneurship and Enterprises and assess opportunities for potential business through research	-	-	-	-
PC31. develop a business plan and a work model,				

considering the 4Ps of Marketing Product, Price, Place and Promotion		-	-	-	-
PC32. identify sources of funding, anticipate, and mitigate any financial/ legal hurdles for the potential business opportunity		-	-	-	-
Customer Service		1	2	-	-
PC33. identify different types of customers and ways to communicate with them		-	-	-	-
PC34. identify and respond to customer requests and needs in a professional manner		-	-	-	-
PC35. use appropriate tools to collect customer feedback		-	-	-	-
PC36. follow appropriate hygiene and grooming standards		-	-	-	-
Getting ready for apprenticeship & Jobs		2	3	-	-
PC37. create a professional Curriculum vitae (Résumé)		-	-	-	-
PC38. search for suitable jobs using reliable offline and online sources such as Employment exchange, recruitment agencies, newspapers etc. and job portals, respectively		-	-	-	-
PC39. apply to identified job openings using offline /online methods as per requirement		-	-	-	-
PC40. answer questions politely, with clarity and confidence, during recruitment and selection		-	-	-	-
PC41. identify apprenticeship opportunities and register for it as per guidelines and requirements		-	-	-	-
NOS Total		20	30	-	-
	AGR/N4959: Culture fish using the biofloc technology (Optional)				
	Arrange the required resources	6	6	-	4
PC1.	identify various materials required for constructing a biofloc tank such as bricks, binding wires, PVC pipes, elbows, ball valves, pipe end cap, tarpaulin, etc.	-	-	-	-
PC2.	select a vendor for purchasing the material based on the quality and price of the material	-	-	-	-
PC3.	purchase the material as per the requirementand store them safely	-	-	-	-
	Set up the biofloc tank	6	8	-	4

PC4.	select a site with the required temperature and sunlight exposure for the construction of biofloc tank	-	-	-	-
PC5.	co-ordinate with an expert to design and setup the biofloc tank skeletal framework and structure	-	-	-	-
PC6.	set up water outlets for removing the sludge and other solid waste from the biofloc tank	-	-	-	-
PC7.	install the aerator pumps, air cylinder, air diffusers, air pipes, air controllers and ball valves	-	-	-	-
	Prepare for stocking the seeds	**8**	**6**	**-**	**4**
PC8.	treat the water with chlorine or an appropriate disinfectant before filling in the biofloc tank.	-	-	-	-
PC9.	fill in the biofloc tank with treated water to the recommended level	-	-	-	-
PC10.	undertake the pre-stocking activities	-	-	-	-
PC11.	Apply the necessary treatment in the water such as raw salt to adjust the TDS and pH levels	-	-	-	-
PC12.	apply the recommended probiotics and immuno-stimulants in the recommended quantity	-	-	-	-
	Stock the seeds	**2**	**4**	**-**	**4**
PC13.	select the fish species suitable for biofloc aquaculture	-	-	-	-
PC14.	calculate the optimum stocking density for the selected fish species	-	-	-	-
PC15.	procure healthy seed stock of the selected fish species	-	-	-	-
PC16.	sanitise the fish seed stock before stocking in the biofloc tank	-	-	-	-

PC17.	stock the fish seed in the biofloc tank maintaining the required stocking density	-	-	-	-
	Perform nutrition management	**2**	**4**	**-**	**2**
PC18.	identify the feed requirement of the stocked fish and feed them maintaining the required level of nutrients	-	-	-	-
PC19.	follow the recommended practices to maintain the feed conversion ratio	-	-	-	-
PC20.	add dietary supplements in the feed as per the requirement	-	-	-	-
	Perform disease management	**2**	**4**	**-**	**6**
PC21.	implement the necessary preventive measuresas per the biofloc technology to control diseaseand insects in the biofloc tank	-	-	-	-
PC22.	carry out regular sampling of the fish in the tankto ensure its optimum growth and identify signs of disease and stress	-	-	-	-
PC23.	quarantine the diseased fish in a separate tank	-	-	-	-
PC24.	apply the recommended treatment to treat the diseased fish	-	-	-	-
	Carry out harvesting and post-harvest management	**4**	**8**	**-**	**6**
PC25.	check the maturity indicators of the fish stockedin the tank	-	-	-	-
PC26.	harvest the fish partially or completely using the recommended method	-	-	-	-
PC27.	perform icing of the fish after being harvested	-	-	-	-
PC28.	store the harvested fish under the recommended temperature and Relative Humidity (RH)	-	-	-	-

PC29.	pack the harvested fish in appropriate container ensuring hygiene	-	-	-	-
PC30.	arrange an appropriate mode of transport to transport the fish to the target market, ensuring minimum stress and damage to the fish during transit	-	-	-	-
PC31.	implement the relevant measures to minimise the extent of manual handling of the fish	-	-	-	-
PC32.	maintain the record of the fish raised and harvested using the biofloc technology	-	-	-	-
	NOS Total	**30**	**40**	**-**	**30**
AGR/N4960: Set up and use the recirculating aquaculture system (Optional)					
	Arrange the required resources	**8**	**10**	**-**	**10**
PC1.	identify various resources required for setting up the RAS such as tank construction material, mechanical filter, bio-filter, water pump, oxygenator, aerator, etc.	-	-	-	-
PC2.	select a vendor based on the quality and priceof the material	-	-	-	-
PC3.	purchase the material as per the requirementand store them safely	-	-	-	-
PC4.	ensure adequate availability of quality water and uninterrupted supply of electricity to operate various RAS equipment	-	-	-	-
PC5.	arrange for power back-up/ electricity generatorto deal with power cuts	-	-	-	-
PC6.	maintain the record of purchase and payment	-	-	-	-
	Set up the RAS	**6**	**10**	**-**	**6**
PC7.	co-ordinate with an expert to set up a circular/ rectangular/ oval fish culture tank of the required capacity according to the available space, quantity of fish to be cultured and their water requirement	-	-	-	-

PC8.	use durable material such as concrete, plasticor metal to construct the tank	-	-	-	-
PC9.	ensure the tank has an outlet with the mesh screen of appropriate mesh size	-	-	-	-
PC10.	install the mechanical filter at the fish culturetank to remove the solids such as faeces, sediment, uneaten feed from the water discharged from the tank	-	-	-	-
PC11.	set up the bio-filter to remove ammonia from water and convert it into nitrogen	-	-	-	-
PC12.	install the oxygenation and aeration devices to re-oxygenate and aerate the water	-	-	-	-
PC13.	set up the water pump to pump oxygenated and aerated water into the culture tank	-	-	-	-
	Stock seeds in the culture tank	**8**	**6**	**-**	**4**
PC14.	fill in the culture pond with treated water to the recommended level	-	-	-	-
PC15.	stock appropriate species of fish suitable for RAS such as barramundi, carp fish, perch, catfish, white fish, tilapia, etc.	-	-	-	-
PC16.	maintain the recommended stocking density in the culture tank	-	-	-	-
PC17.	apply lime and other recommended treatment such as probiotics and immuno- stimulants inthe recommended quantity in the tank	-	-	-	-
	Use and maintain the RAS	**8**	**10**	**-**	**6**
PC18.	supply oxygenated water into the tank in the required quantity	-	-	-	-
PC19.	maintain the recommended pressure while supplying water into the tank	-	-	-	-
PC20.	carry out stripping in the culture tank with the use of aerator to clear the accumulated gases	-	-	-	-

PC21.	sample water in the culture tank regularly to ensure appropriate quality parameters are maintained	-	-	-	-
PC22.	clean the mesh screen installed in the tank regularly	-	-	-	-
PC23.	clean/ flush the mechanical and bio filters regularly to prevent the accumulation of sludge and biological waste	-	-	-	-
PC24.	carry out minor repairs in a RAS and co-ordinate with a technician for complex repair needs	-	-	-	-
PC25.	maintain the record of repair and maintenance	-	-	-	-
NOS Total		**30**	**40**		**30**

SECTION 2
EVIDENCE OF LEVEL

OPTION B

Title/ Name of qualification/ component: Aquaculture Technical Supervisor			**Level: 5**
NSQF Domain	**NSQF Domain**	**NSQF Domain**	**NSQF Domain**
Process	● Prepare the pond for aquaculture ● Undertake pre-stocking activities ● Carry out post-stocking activities ● Carry out nutrient management ● Carry out disease management ● Construct the biofloc tank ● Prepare for stocking seed ● Set up the RAS	An Aquaculture Technical Supervisor is responsible for ensuring the preparation of the pond for aquaculture, maintaining a healthy growth of the cultured species and harvesting them using the recommended methods. The person may also use the Biofloc and Recirculating Aquaculture System (RAS) technologies.	5
Professional knowledge	● Use and maintain the RAS ● Promote inclusion at work ● Perform nutrition management ● Perform disease management	The job holder is required to have knowledge of facts, principles, processes and general concepts in a field of work or study. He/She requires the knowledge of soil and water quality requirement for culture, maintenance of plankton productivity through fertilization and manuring, pre-stocking pond preparation, seed stocking, post-stocking culture operation, liming, manuring, fertilization, supplementary method of maintaining safety checklists, routine physio-chemical testing of water. He/She is also required to determine the types of	5

		fertilizers to be applied to the pond at different stage of culture operation, choose appropriate measures for controlling aquatic insects prior to seed stocking, ensure seed stocking after due acclimatization	
Professional skill	• Optimise resource utilisation • Carry out waste management • Carry out harvesting and post-harvest management • Arrange the required resources	The job holder is expected to skills required to decide on the correct methods to be used for pond preparation activities and culture of aquatic organisms, plan and organize the work order and jobs received from the manager, plan to utilize time effectively, manage good relationships with manager and farm staff, study the problem and provide the best solution, immediately identify problems and solve them.	5
Core Skills	• Supervise harvesting and post-harvest management • Maintain personal hygiene and safety • Maintain the health of cultured organisms • Stock seed in the culture tank • Arrange the required resources	The job holder should be able to read internal information documents sent by internal teams, read equipment manuals and process documents to understand the equipment operation and process requirement, record and maintain all the information regarding farming, record information on water treatment and fertilization of ponds, effectively communicate with the staff and colleagues. The job holder should supervise various activities including harvesting process, maintenance of cultured organisms.	5
Responsibility	• Preparation of pond • Maintaining growth of cultures species • Useage of Biofloc and Recirculating Aquaculture System (RAS) technologies.	An Aquaculture Technical Supervisor is responsible for ensuring the preparation of the pond for aquaculture, maintaining a healthy growth of the cultured species and harvesting them using the recommended methods. The person may also use the Biofloc and Recirculating Aquaculture System (RAS) technologies.	5

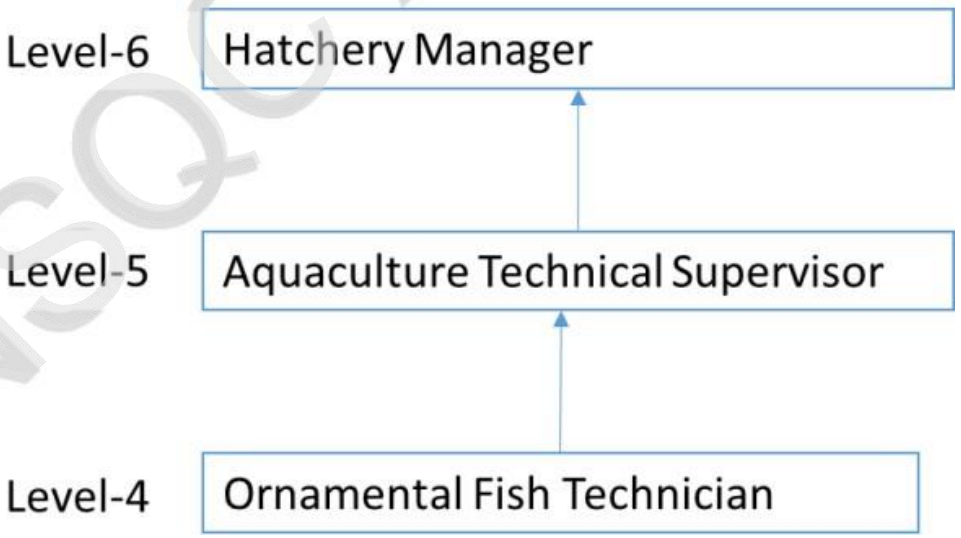
SECTION 3
EVIDENCE OF NEED

26	**What evidence is there that the qualification is needed? What is the estimated uptake of this qualification and what is the basis of this estimate?**
Basis	
Need of the qualification	While collecting data from the companies for the occupational map, we also took feedback from industry, training institutions which was collected with respect to roles for which qualification packs development, was to be prioritized. This was largely based onvolume of people required, quantitative and qualitative shortfall which the industry feels they face. Governing council of ASCI and Occupational Standards Committee which comprises of experts & senior leaders gave final approval and endorsement for the same. India is the third largest producer of fish and the second largest producer of fresh water fish in the world (total production is 8.23 million tonnes and 3.25 million tonnes for marine and 4.98 million tonnes for inland fisheries. India is home to more than 10 percent of the global fish diversity. Presently, the country ranks second in the world in total fish production with an annual fish production of about 9.06 million metric tonnes..
Industry Relevance	Validations have been received from CIFA, Professor KUFOS, Central Agricultural University (Imphal), Krishi Vigyan Kendra Thoubal, SAU- Najaji Deshmukh Veterinary Science University, Central Marine Fisheries Research Institute.
Usage of the qualification	An NSQF aligned training to the persons involved in grooming of Aquaculture Technical Supervisor shall provide opportunities to the incumbents for horizontal and vertical career progression. Competency-based training shall imbibe professionalism in the job-role. Being an important and ever-expanding job, the job-role of Aquaculture Technical Supervisor may well be included in the vocational education stream of school education. The Qualification Pack shall also be helpful in conducting Recognition of Prior Learning of the Aquaculture Technical Supervisor
Estimated uptake	

	QP/Job Role Name	"States where Demand exist	"District where Demand exist	Projections for the next 3 years
	Aquaculture Technical Supervisor	Kerala, Karnataka, Tamil Nadu, Odisha, Andhra Pradesh, Daman & Diu, Andaman & Nicobar Islands, Maharashtra, Goa, West Bengal, Himachal Pradesh, J&K, Jharkhand, Chhattisgarh & Uttarakhand	Various district of mentioned States	2200
27	**Recommendation from the concerned Line Ministry of the Government/Regulatory Body. To be supported by documentary evidences** Have received concurrence from the Ministry of Fisheries, Animal Husbandry and Dairying			
28	**What steps were taken to ensure that the qualification(s) does (do) not duplicate already existing or planned qualifications in the NSQF? Give justification for presenting a duplicate qualification** This is the revised version of the already NSQC approved QP. The revision has been undertaken as the QP is going to expire soon.			
29	**What arrangements are in place to monitor and review the qualification(s)? What data will be used and at what point will the qualification(s) be revised or updated? Specify the review process here** Any institution or individual is welcome to send the feedback, which is recorded and considered during next review cycle. Communication will be sent for any feedback to all the main stakeholders/users one month prior to the review of the qualifications pack. A formal review is scheduled in three years.			

Please attach most relevant and recent documents giving further information about any of the topics above.
Give the titles and other relevant details of the document(s) here. Include page references showing where to find the relevant information.

~~SECTION 4~~
EVIDENCE OF PROGRESSION

30	**What steps have been taken in the design of this or other qualifications to ensure that there is a clear path to other qualifications in this sector?** ***Show the career map here to reflect the clear progression*** Career path in the agriculture sector is generally in terms of activities done & ownership of responsibility because they are primarily self-wage employment/ entrepreneurship roles. **Annexure 1: Career Map of Aquaculture Technical Supervisor** 

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