

## Qualification Pack



# Coldwater Aquaculture Farmer

QP Code: AGR/Q4914

Version: 2.0

NSQF Level: 4

Agriculture Skill Council of India || 6th Floor, GNG Tower, Plot No. 10, Sector -44, Gurgaon  
Haryana-122004 || email:shrinkhala@asci-india.com

## Qualification Pack

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## Qualification Pack

### AGR/Q4914: Coldwater Aquaculture Farmer

#### Brief Job Description

A Coldwater Aquaculture Farmer cultures fish and other organisms in the hilly regions along coldwater streams and riverbanks. The person is responsible for the management of rearing facilities, maintenance of fish/organism's health, harvesting and marketing of the harvested fish/organism.

#### Personal Attributes

The person should be physically fit and able to work in cold water for a long duration. The individual should be a good swimmer and able to demonstrate patience and perseverance at work.

#### Applicable National Occupational Standards (NOS)

##### Compulsory NOS:

1. [AGR/N4946: Prepare for coldwater aquaculture](#)
2. [AGR/N4947: Carry out coldwater aquaculture](#)
3. [AGR/N4948: Harvest and market fish](#)
4. [AGR/N4918: Ensure health, hygiene and safety during culture operations](#)
5. [DGT/VSQ/N0102: Employability Skills \(60 Hours\)](#)

#### Qualification Pack (QP) Parameters

<b>Sector</b>	Agriculture
<b>Sub-Sector</b>	Fisheries
<b>Occupation</b>	Aquaculture
<b>Country</b>	India
<b>NSQF Level</b>	4
<b>Credits</b>	13
<b>Aligned to NCO/ISCO/ISIC Code</b>	NCO-2015/6221

### Qualification Pack

<b>Minimum Educational Qualification &amp; Experience</b>	12th grade Pass OR Completed 2nd year of the 3-year diploma after 10 (and pursuing regular diploma) OR 10th grade pass (plus 2-year NTC) OR 10th grade pass (plus 1-year NTC plus 1 year NAC) OR 8th grade pass with 2 year NTC plus 1 year NAC plus 1 year CITS OR 10th grade pass and pursuing continuous schooling OR 10th grade pass with 2 Years of experience relevant experience OR Previous relevant Qualification of NSQF Level (Level 3.0 with minimum education as 8th Grade pass) with 3 Years of experience relevant experience OR Previous relevant Qualification of NSQF Level (Level 3.5 with 1.5- year relevant experience)
<b>Minimum Level of Education for Training in School</b>	
<b>Pre-Requisite License or Training</b>	NA
<b>Minimum Job Entry Age</b>	18 Years
<b>Last Reviewed On</b>	NA
<b>Next Review Date</b>	11/08/2025
<b>NSQC Approval Date</b>	11/08/2020
<b>Version</b>	2.0
<b>Reference code on NQR</b>	QG-04-AG-00300-2023-V1.1-ASCI
<b>NQR Version</b>	1.1

## Qualification Pack

### AGR/N4946: Prepare for coldwater aquaculture

#### Description

This unit covers the activities that need to be performed during preparation for coldwater aquaculture.

#### Scope

The scope covers the following :

- Select the site and fish/organism species
- Prepare the water body

#### Elements and Performance Criteria

##### *Select the site and fish/organism species*

To be competent, the user/individual on the job must be able to:

- PC1.** select a site for coldwater aquaculture with access to a regular source of coldwater and direct sunlight for 7-8 hours a day
- PC2.** check that the site is not prone to floods, droughts, excessive temperature fluctuations, etc.
- PC3.** identify the species and varieties of fish/organism, viz rainbow trout, etc, suitable for farming in the specific coldwater body
- PC4.** identify the quantity of fish/organism to be reared based on the demand, budget and site constraints
- PC5.** select fresh fish/organism seed from natural sources such as river systems, lakes and reservoirs to avoid inbreeding depression
- PC6.** procure seed for rearing indigenous and exotic ornamental fish
- PC7.** check that fishing inputs, electricity, an efficient communication system and a reliable and low-cost transport is available near the site
- PC8.** assess the ability of the soil to support coldwater aquaculture by testing the soil through an authorised lab

##### *Prepare the water body*

To be competent, the user/individual on the job must be able to:

- PC9.** carry out treatment of the pond soil with the recommended chemicals as advised by the lab
- PC10.** prepare the correct soil mixture of sand and clay so that it has the capacity of retaining water
- PC11.** construct a pond/tank using the recommended material as per the budget and quantity of fish/organism to be cultured
- PC12.** divide the total pond area for the construction of nursery pond, rearing tank, stocking pond and bio-treatment pond
- PC13.** carry out poly-lining of the pond, in case of cultivation of indigenous and exotic ornamental fish
- PC14.** construct a pond to facilitate harvesting
- PC15.** remove unwanted objects such as weeds, bushes and rocks from the water body

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- PC16.** construct seepage-free, secure, compact and sloped dyke
- PC17.** plant grass or plants along the dyke to prevent erosion
- PC18.** construct a durable raceway using reinforced concrete
- PC19.** construct inlet and outlet in the pond
- PC20.** install wire mesh at the inlet and outlet in a manner that prevents the entry of unwanted objects and fauna and exit of farmed fish/organism
- PC21.** erect fences to avoid theft and entry of predatory animals/birds
- PC22.** apply lime to make the soil pH optimum
- PC23.** dry the tank in sunlight for adequate number of days after treatment

## Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** guidelines and policies for coldwater aquaculture as per the geography
- KU2.** licensing requirements for coldwater aquaculture
- KU3.** procedures followed by the organization for the preparation of water body
- KU4.** conditions suitable for coldwater aquaculture
- KU5.** how to prepare the waterbody for coldwater aquaculture
- KU6.** fish/organism species that can be farmed in coldwater
- KU7.** method for rearing the selected species
- KU8.** method of poly-lining a tank/pond for the cultivation of indigenous and exotic ornamental fish
- KU9.** soil requirements of a pond to support coldwater aquaculture
- KU10.** inputs required for coldwater aquaculture
- KU11.** the process of constructing pond/tank/raceway for aquaculture in coldwater
- KU12.** how to construct dykes and fences
- KU13.** suitable material for the construction of pond
- KU14.** pond treatment activities to be carried out prior to stocking
- KU15.** chemicals and other material required for disinfecting the pond

## Generic Skills (GS)

User/individual on the job needs to know how to:

- GS1.** draft letters in the local language
- GS2.** read articles and government scheme documents regarding coldwater aquaculture
- GS3.** communicate and co-ordinate with the co-workers and relevant authority during aquaculture
- GS4.** select the site and the fish/organism species for coldwater aquaculture
- GS5.** select the material to be used for the construction of pond
- GS6.** plan and organise resources required for coldwater aquaculture
- GS7.** resolve problems encountered during preparation

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### Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Select the site and fish/organism species</i>	<b>8</b>	<b>26</b>	-	-
<b>PC1.</b> select a site for coldwater aquaculture with access to a regular source of coldwater and direct sunlight for 7-8 hours a day	1	3	-	-
<b>PC2.</b> check that the site is not prone to floods, droughts, excessive temperature fluctuations, etc.	1	3	-	-
<b>PC3.</b> identify the species and varieties of fish/organism, viz rainbow trout, etc, suitable for farming in the specific coldwater body	1	3	-	-
<b>PC4.</b> identify the quantity of fish/organism to be reared based on the demand, budget and site constraints	1	3	-	-
<b>PC5.</b> select fresh fish/organism seed from natural sources such as river systems, lakes and reservoirs to avoid inbreeding depression	1	4	-	-
<b>PC6.</b> procure seed for rearing indigenous and exotic ornamental fish	1	4	-	-
<b>PC7.</b> check that fishing inputs, electricity, an efficient communication system and a reliable and low-cost transport is available near the site	1	3	-	-
<b>PC8.</b> assess the ability of the soil to support coldwater aquaculture by testing the soil through an authorised lab	1	3	-	-
<i>Prepare the water body</i>	<b>22</b>	<b>44</b>	-	-
<b>PC9.</b> carry out treatment of the pond soil with the recommended chemicals as advised by the lab	2	3	-	-
<b>PC10.</b> prepare the correct soil mixture of sand and clay so that it has the capacity of retaining water	1	4	-	-
<b>PC11.</b> construct a pond/tank using the recommended material as per the budget and quantity of fish/organism to be cultured	2	3	-	-

### Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC12.</b> divide the total pond area for the construction of nursery pond, rearing tank, stocking pond and bio-treatment pond	2	3	-	-
<b>PC13.</b> carry out poly-lining of the pond, in case of cultivation of indigenous and exotic ornamental fish	1	3	-	-
<b>PC14.</b> construct a pond to facilitate harvesting	2	3	-	-
<b>PC15.</b> remove unwanted objects such as weeds, bushes and rocks from the water body	2	4	-	-
<b>PC16.</b> construct seepage-free, secure, compact and sloped dyke	2	3	-	-
<b>PC17.</b> plant grass or plants along the dyke to prevent erosion	1	3	-	-
<b>PC18.</b> construct a durable raceway using reinforced concrete	1	2	-	-
<b>PC19.</b> construct inlet and outlet in the pond	2	3	-	-
<b>PC20.</b> install wire mesh at the inlet and outlet in a manner that prevents the entry of unwanted objects and fauna and exit of farmed fish/organism	1	3	-	-
<b>PC21.</b> erect fences to avoid theft and entry of predatory animals/birds	1	3	-	-
<b>PC22.</b> apply lime to make the soil pH optimum	1	2	-	-
<b>PC23.</b> dry the tank in sunlight for adequate number of days after treatment	1	2	-	-
<b>NOS Total</b>	<b>30</b>	<b>70</b>	-	-

## Qualification Pack

### National Occupational Standards (NOS) Parameters

<b>NOS Code</b>	AGR/N4946
<b>NOS Name</b>	Prepare for coldwater aquaculture
<b>Sector</b>	Agriculture
<b>Sub-Sector</b>	Fisheries
<b>Occupation</b>	Aquaculture
<b>NSQF Level</b>	4
<b>Credits</b>	2
<b>Version</b>	1.0
<b>Last Reviewed Date</b>	NA
<b>Next Review Date</b>	11/08/2025
<b>NSQC Clearance Date</b>	11/08/2020

## Qualification Pack

### AGR/N4947: Carry out coldwater aquaculture

#### Description

This unit is about rearing and maintenance activities performed during coldwater aquaculture.

#### Scope

The scope covers the following :

- Carry out rearing activity
- Maintain the health of fish/organism in pond / raceway / hatchery

#### Elements and Performance Criteria

##### *Carry out rearing activity*

To be competent, the user/individual on the job must be able to:

- PC1.** stock spawn in the nursery pond
- PC2.** rear spawn for the recommended period, allowing it to attain the length of a fry
- PC3.** transfer fry from the nursery pond into the rearing pond
- PC4.** rear fry in the rearing pond for the recommended period to allow it to develop into fingerling
- PC5.** transfer fingerling from the rearing pond into the stocking pond
- PC6.** rear fingerling in the stocking pond for the recommended duration till it attains a marketable size
- PC7.** maintain the stocking density according to the requirements of the selected species
- PC8.** apply fertilizer at the recommended intervals in the required quantity
- PC9.** feed fish/organism as per the feeding schedule and provide supplementary feed in balanced quantity, if required
- PC10.** treat the pond water to maintain its quality

##### *Maintain the health of fish/organism in pond / raceway / hatchery*

To be competent, the user/individual on the job must be able to:

- PC11.** check the water body regularly for any signs of stress and disease amongst the fish/organism
- PC12.** get a sample from the pond tested for any disease through an authorised lab
- PC13.** apply the treatment in the pond as recommended by the lab
- PC14.** remove the deposit of excessive organic matter from the pond bottom to avoid water contamination, by raking regularly
- PC15.** maintain good quality of feed for the fish/organism to ensure their healthy growth
- PC16.** disinfect the entire water body to prevent diseases, by spreading the recommended chemicals uniformly
- PC17.** remove any dead fish/organism from the pond

#### Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

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- KU1.** guidelines and policies for coldwater aquaculture as per the geography
- KU2.** organizational methods for rearing the selected fish/organism species
- KU3.** various rearing activities to be performed during coldwater aquaculture
- KU4.** nutritional requirements of coldwater fish/organism
- KU5.** how to prepare feed for fish/organism
- KU6.** supplement used in fish/organism feed and their appropriate quantity to be used
- KU7.** how to assess the growth of fish/organism
- KU8.** signs of stress and various diseases amongst fish/organism
- KU9.** treatment of various fish/organism diseases
- KU10.** inbreeding depression and how to avoid it
- KU11.** stocking of healthy and fast-growing species
- KU12.** the concept of stocking density and how to maintain optimum stocking density
- KU13.** actions to be taken in case of disease outbreak in the pond

## Generic Skills (GS)

User/individual on the job needs to know how to:

- GS1.** write notes in the local language
- GS2.** fill checklists as per the organisational policy
- GS3.** draft letters in the local language to communicate with the local authority
- GS4.** read the local legislations and norms for coldwater aquaculture
- GS5.** communicate politely with co-workers during aquaculture
- GS6.** co-ordinate with the relevant person or authority regarding any emergencies
- GS7.** select the appropriate feed to be given to fish/organism
- GS8.** decide on the supplemented feed to be included in the fish feed, as required
- GS9.** decide on the right type of chemical to be used in the pond for disinfecting and treating it
- GS10.** take decision regarding the actions to be taken in case of slow growth, water pollution, and disease outbreak
- GS11.** plan and organise resources required for maintaining the health of coldwater fish/organism
- GS12.** resolve problems encountered during coldwater aquaculture
- GS13.** check the fish/organism's health regularly to ensure their healthy growth

## Qualification Pack

### Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Carry out rearing activity</i>	<b>16</b>	<b>37</b>	-	-
<b>PC1.</b> stock spawn in the nursery pond	2	3	-	-
<b>PC2.</b> rear spawn for the recommended period, allowing it to attain the length of a fry	1	3	-	-
<b>PC3.</b> transfer fry from the nursery pond into the rearing pond	2	5	-	-
<b>PC4.</b> rear fry in the rearing pond for the recommended period to allow it to develop into fingerling	1	2	-	-
<b>PC5.</b> transfer fingerling from the rearing pond into the stocking pond	2	5	-	-
<b>PC6.</b> rear fingerling in the stocking pond for the recommended duration till it attains a marketable size	2	3	-	-
<b>PC7.</b> maintain the stocking density according to the requirements of the selected species	2	5	-	-
<b>PC8.</b> apply fertilizer at the recommended intervals in the required quantity	1	3	-	-
<b>PC9.</b> feed fish/organism as per the feeding schedule and provide supplementary feed in balanced quantity, if required	2	5	-	-
<b>PC10.</b> treat the pond water to maintain its quality	1	3	-	-
<i>Maintain the health of fish/organism in pond / raceway / hatchery</i>	<b>14</b>	<b>33</b>	-	-
<b>PC11.</b> check the water body regularly for any signs of stress and disease amongst the fish/organism	2	5	-	-
<b>PC12.</b> get a sample from the pond tested for any disease through an authorised lab	2	4	-	-
<b>PC13.</b> apply the treatment in the pond as recommended by the lab	2	4	-	-

### Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC14.</b> remove the deposit of excessive organic matter from the pond bottom to avoid water contamination, by raking regularly	2	5	-	-
<b>PC15.</b> maintain good quality of feed for the fish/organism to ensure their healthy growth	2	5	-	-
<b>PC16.</b> disinfect the entire water body to prevent diseases, by spreading the recommended chemicals uniformly	2	5	-	-
<b>PC17.</b> remove any dead fish/organism from the pond	2	5	-	-
<b>NOS Total</b>	<b>30</b>	<b>70</b>	-	-

## Qualification Pack

### National Occupational Standards (NOS) Parameters

<b>NOS Code</b>	AGR/N4947
<b>NOS Name</b>	Carry out coldwater aquaculture
<b>Sector</b>	Agriculture
<b>Sub-Sector</b>	Fisheries
<b>Occupation</b>	Aquaculture
<b>NSQF Level</b>	4
<b>Credits</b>	3
<b>Version</b>	1.0
<b>Last Reviewed Date</b>	NA
<b>Next Review Date</b>	11/08/2025
<b>NSQC Clearance Date</b>	11/08/2020

## Qualification Pack

### AGR/N4948: Harvest and market fish

#### Description

This unit is about harvesting and marketing of fish and includes sorting and grading as well.

#### Scope

The scope covers the following :

- Harvest the fish
- Market the fish

#### Elements and Performance Criteria

##### *Harvest the fish*

To be competent, the user/individual on the job must be able to:

- PC1.** select the appropriate time of harvesting based on the growth of fish
- PC2.** prepare the tools for harvesting
- PC3.** harvest fish in a safe manner without causing them stress and physical damage
- PC4.** discard any dead and damaged fish in an environment-friendly manner
- PC5.** sort and grade the harvested fish
- PC6.** store the harvested fish in suitable conditions, if not sold fresh
- PC7.** maintain the record of harvested fish

##### *Market the fish*

To be competent, the user/individual on the job must be able to:

- PC8.** check the demand and market rate for the harvested fish
- PC9.** identify the potential market/aggregators/buyers of fish
- PC10.** negotiate the price with the buyer
- PC11.** use electronic payment methods for accepting payments such as BHIM UPI, payment apps, e-wallet etc.
- PC12.** pack and transport the harvested fish in good condition
- PC13.** maintain the record of sale
- PC14.** calculate the benefit-cost (B:C) ratio

#### Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** guidelines and policies for aquaculture as per the geography
- KU2.** how to identify the appropriate time for harvesting
- KU3.** various factors that impact the growth of fish
- KU4.** various methods of harvesting fish

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- KU5.** how to harvest fish without causing any damage to it and the environment
- KU6.** how to harvest fish without causing any damage to it and the environment
- KU7.** how to discard dead and damaged fish in compliance with the local legislation
- KU8.** various criteria and methods of sorting and grading fish
- KU9.** how to identify the market/aggregators/buyers of fish
- KU10.** how to identify the demand of various types of fish
- KU11.** how to identify the market/aggregators/buyers of fish
- KU12.** how to assess the quality of harvested fish on various parameters
- KU13.** various methods of taking payment from the buyers/ aggregators

## Generic Skills (GS)

User/individual on the job needs to know how to:

- GS1.** maintain the data of harvested fish in reports
- GS2.** prepare contact lists of local buyers and aggregators to supply fish
- GS3.** draft letters in the local language to communicate with the local buyers and authority
- GS4.** read reports on quality parameters and aquaculture written in the local language
- GS5.** discuss the quality and cost of harvested fish with the potential buyers and aggregators
- GS6.** interact with co-workers, suppliers, buyers and aggregators politely
- GS7.** select the right time for harvesting of fish
- GS8.** select the right buyer/ aggregators and market for selling fish
- GS9.** organise suitable transport for transporting fish to the market or buyer
- GS10.** develop rapport with the buyers and aggregators
- GS11.** think through the problem, evaluate the possible solutions and take up optimum / best solutions
- GS12.** identify economically viable and operationally feasible solutions which meet the buyer's needs
- GS13.** check the quality of harvested fish to identify any improvements required
- GS14.** identify opportunities for selling the harvested fish in various regions
- GS15.** identify ways for efficient harvesting of fish

## Qualification Pack

### Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Harvest the fish</i>	<b>15</b>	<b>28</b>	-	-
<b>PC1.</b> select the appropriate time of harvesting based on the growth of fish	3	4	-	-
<b>PC2.</b> prepare the tools for harvesting	2	3	-	-
<b>PC3.</b> harvest fish in a safe manner without causing them stress and physical damage	2	3	-	-
<b>PC4.</b> discard any dead and damaged fish in an environment-friendly manner	2	3	-	-
<b>PC5.</b> sort and grade the harvested fish	2	5	-	-
<b>PC6.</b> store the harvested fish in suitable conditions, if not sold fresh	2	5	-	-
<b>PC7.</b> maintain the record of harvested fish	2	5	-	-
<i>Market the fish</i>	<b>15</b>	<b>42</b>	-	-
<b>PC8.</b> check the demand and market rate for the harvested fish	2	5	-	-
<b>PC9.</b> identify the potential market/aggregators/buyers of fish	2	5	-	-
<b>PC10.</b> negotiate the price with the buyer	2	6	-	-
<b>PC11.</b> use electronic payment methods for accepting payments such as BHIM UPI, payment apps, e-wallet etc.	3	7	-	-
<b>PC12.</b> pack and transport the harvested fish in good condition	2	7	-	-
<b>PC13.</b> maintain the record of sale	2	5	-	-
<b>PC14.</b> calculate the benefit-cost (B:C) ratio	2	7	-	-
<b>NOS Total</b>	<b>30</b>	<b>70</b>	-	-

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### National Occupational Standards (NOS) Parameters

<b>NOS Code</b>	AGR/N4948
<b>NOS Name</b>	Harvest and market fish
<b>Sector</b>	Agriculture
<b>Sub-Sector</b>	Fisheries
<b>Occupation</b>	Aquaculture
<b>NSQF Level</b>	4
<b>Credits</b>	2
<b>Version</b>	1.0
<b>Last Reviewed Date</b>	NA
<b>Next Review Date</b>	11/08/2025
<b>NSQC Clearance Date</b>	11/08/2020

## Qualification Pack

### AGR/N4918: Ensure health, hygiene and safety during culture operations

#### Description

This OS unit is about maintaining health, hygiene and safety during the culture operations.

#### Scope

The scope covers the following :

- Ensure the upkeep of water body, tools and equipment
- Maintain personal hygiene and safety
- Maintain the health of cultured organisms

#### Elements and Performance Criteria

##### *Ensure the upkeep of water body, tools and equipment*

To be competent, the user/individual on the job must be able to:

- 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*

To be competent, the user/individual on the job must be able to:

- 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.** use the recommended soap/ sanitiser to sanitise the hands and ensure the other personnel also use it
- PC12.** follow the standard procedures to deal with accidents and emergencies
- PC13.** use the first-aid kit to provide appropriate treatment in case of any injuries
- PC14.** co-ordinate with the emergency services for further medical attention

##### *Maintain the health of cultured organisms*

To be competent, the user/individual on the job must be able to:

- PC15.** follow the recommended prophylactic measures and ensure hygienic conditions during all the stages of growth of the cultured organisms

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- PC16.** examine the cultured organisms regularly to detect the symptoms of parasites, pathogenic infections, phenotypic disorders, etc.
- PC17.** ensure the necessary medicines/ chemicals are applied as per prescription, maintaining the toxicity levels within the prescribed limits
- PC18.** use the recommended therapeutic practices in combination with the prescribed treatment for the speedy recovery of the diseased organisms
- PC19.** identify a quarantine area and arrange for the diseased organisms to be quarantined and treated
- PC20.** co-ordinate with an expert to deal with unexpected disease outbreak among the cultured organisms
- PC21.** ensure timely removal of the dead and moribund organisms from the water body
- PC22.** arrange for safe disposal of the dead and diseased organisms

## Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** various practices to protect the aquaculture farm and dykes from erosion and natural calamities
- KU2.** how to protect the cultured organisms from water/ air/ fomite borne diseases and contamination from handling
- KU3.** the process of identifying and eliminating common predators and preying organisms in the water body
- KU4.** the importance of fencing to protect the water body from external threats
- KU5.** how to prevent the escape of cultured organisms from the culture pond/ tank
- KU6.** the importance and process of conducting regular tests to maintain the recommended soil and water quality parameters in the water body
- KU7.** the importance of cleaning and de-contaminating the nets, vessels, tools and equipment
- KU8.** basic safety checks to be undertaken before operating any tools and equipment
- KU9.** use of the relevant PPE during various aquaculture operations
- KU10.** standard procedures to deal with accidents and emergencies
- KU11.** how to administer first-aid and request further medical attention
- KU12.** recommended prophylactic measures to prevent disease among cultured organisms
- KU13.** the process of examining the cultured organisms to detect the symptoms of parasites, pathogenic infections, phenotypic disorders, etc.
- KU14.** the process of applying medicines/ chemicals while maintaining the toxicity levels within the prescribed limits
- KU15.** use of the various therapeutic practices in combination with the prescribed treatments for the speedy recovery of the diseased organisms
- KU16.** the process of identifying diseased organisms, quarantining and treating them
- KU17.** the importance and process of removing and disposing the dead and moribund organisms from the water body

## Generic Skills (GS)

## Qualification Pack

User/individual on the job needs to know how to:

- GS1.** maintain work-related notes and records
- GS2.** read the relevant literature to get latest updates about the field of work
- GS3.** listen attentively to understand the information being shared by the speaker
- GS4.** communicate politely and professionally
- GS5.** co-ordinate with co-workers to achieve work objectives
- GS6.** plan and prioritise tasks to ensure timely completion
- GS7.** evaluate all possible solutions to a problem to select the best one
- GS8.** identify possible disruptions to work and take appropriate preventive measures
- GS9.** take quick decisions to deal with workplace emergencies/ accidents

## Qualification Pack

### Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Ensure the upkeep of water body, tools and equipment</i>	<b>10</b>	<b>12</b>	-	<b>8</b>
<b>PC1.</b> ensure the necessary practices are followed to protect the aquaculture farm and dykes from erosion and natural calamities such as flood and storms	-	-	-	-
<b>PC2.</b> ensure protection of the cultured organisms from water/ air/ fomite borne diseases and contamination from handling	-	-	-	-
<b>PC3.</b> identify and eliminate common predators and preying organisms from the water body	-	-	-	-
<b>PC4.</b> ensure fences are erected to protect the water body from external threats	-	-	-	-
<b>PC5.</b> restrict the entry of unauthorised persons into the aquaculture area	-	-	-	-
<b>PC6.</b> follow the recommended practices to prevent the escape of cultured organisms from the culture pond/ tank	-	-	-	-
<b>PC7.</b> conduct regular tests to ensure the appropriate soil and water quality parameters are maintained in the water body	-	-	-	-
<b>PC8.</b> ensure all the nets, vessels, tools and equipment are cleaned and de-contaminated regularly	-	-	-	-
<i>Maintain personal hygiene and safety</i>	<b>10</b>	<b>12</b>	-	<b>12</b>
<b>PC9.</b> ensure basic safety checks are undertaken before the operation of any tools and equipment	-	-	-	-
<b>PC10.</b> ensure the use of relevant Personal Protective Equipment (PPE) during various aquaculture operations	-	-	-	-
<b>PC11.</b> use the recommended soap/ sanitiser to sanitise the hands and ensure the other personnel also use it	-	-	-	-

### Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC12.</b> follow the standard procedures to deal with accidents and emergencies	-	-	-	-
<b>PC13.</b> use the first-aid kit to provide appropriate treatment in case of any injuries	-	-	-	-
<b>PC14.</b> co-ordinate with the emergency services for further medical attention	-	-	-	-
<i>Maintain the health of cultured organisms</i>	<b>10</b>	<b>16</b>	-	<b>10</b>
<b>PC15.</b> follow the recommended prophylactic measures and ensure hygienic conditions during all the stages of growth of the cultured organisms	-	-	-	-
<b>PC16.</b> examine the cultured organisms regularly to detect the symptoms of parasites, pathogenic infections, phenotypic disorders, etc.	-	-	-	-
<b>PC17.</b> ensure the necessary medicines/ chemicals are applied as per prescription, maintaining the toxicity levels within the prescribed limits	-	-	-	-
<b>PC18.</b> use the recommended therapeutic practices in combination with the prescribed treatment for the speedy recovery of the diseased organisms	-	-	-	-
<b>PC19.</b> identify a quarantine area and arrange for the diseased organisms to be quarantined and treated	-	-	-	-
<b>PC20.</b> co-ordinate with an expert to deal with unexpected disease outbreak among the cultured organisms	-	-	-	-
<b>PC21.</b> ensure timely removal of the dead and moribund organisms from the water body	-	-	-	-
<b>PC22.</b> arrange for safe disposal of the dead and diseased organisms	-	-	-	-
<b>NOS Total</b>	<b>30</b>	<b>40</b>	-	<b>30</b>

## Qualification Pack

### National Occupational Standards (NOS) Parameters

<b>NOS Code</b>	AGR/N4918
<b>NOS Name</b>	Ensure health, hygiene and safety during culture operations
<b>Sector</b>	Agriculture
<b>Sub-Sector</b>	Fisheries
<b>Occupation</b>	Aquaculture
<b>NSQF Level</b>	5
<b>Credits</b>	1
<b>Version</b>	2.0
<b>Last Reviewed Date</b>	31/03/2022
<b>Next Review Date</b>	11/08/2025
<b>NSQC Clearance Date</b>	11/08/2020

## Qualification Pack

### DGT/VSQ/N0102: Employability Skills (60 Hours)

#### Description

This unit is about employability skills, Constitutional values, becoming a professional in the 21st Century, digital, financial, and legal literacy, diversity and Inclusion, English and communication skills, customer service, entrepreneurship, and apprenticeship, getting ready for jobs and career development.

#### Scope

The scope covers the following :

- Introduction to Employability Skills
- Constitutional values - Citizenship
- Becoming a Professional in the 21st Century
- Basic English Skills
- Career Development & Goal Setting
- Communication Skills
- Diversity & Inclusion
- Financial and Legal Literacy
- Essential Digital Skills
- Entrepreneurship
- Customer Service
- Getting ready for Apprenticeship & Jobs

#### Elements and Performance Criteria

##### *Introduction to Employability Skills*

To be competent, the user/individual on the job must be able to:

- PC1.** identify employability skills required for jobs in various industries
- PC2.** identify and explore learning and employability portals

##### *Constitutional values - Citizenship*

To be competent, the user/individual on the job must be able to:

- 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*

To be competent, the user/individual on the job must be able to:

- 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*

To be competent, the user/individual on the job must be able to:

## Qualification Pack

- 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*

To be competent, the user/individual on the job must be able to:

- 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*

To be competent, the user/individual on the job must be able to:

- 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*

To be competent, the user/individual on the job must be able to:

- 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*

To be competent, the user/individual on the job must be able to:

- 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

### *Essential Digital Skills*

To be competent, the user/individual on the job must be able to:

- PC20.** operate digital devices and carry out basic internet operations securely and safely
- PC21.** use e- mail and social media platforms and virtual collaboration tools to work effectively
- PC22.** use basic features of word processor, spreadsheets, and presentations

### *Entrepreneurship*

To be competent, the user/individual on the job must be able to:

- 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*

To be competent, the user/individual on the job must be able to:

- PC26.** identify different types of customers
- PC27.** identify and respond to customer requests and needs in a professional manner.

## Qualification Pack

**PC28.** follow appropriate hygiene and grooming standards

*Getting ready for apprenticeship & Jobs*

To be competent, the user/individual on the job must be able to:

**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

## Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

**KU1.** need for employability skills and different learning and employability related portals

**KU2.** various constitutional and personal values

**KU3.** different environmentally sustainable practices and their importance

**KU4.** Twenty first (21st) century skills and their importance

**KU5.** how to use English language for effective verbal (face to face and telephonic) and written communication in formal and informal set up

**KU6.** importance of career development and setting long- and short-term goals

**KU7.** about effective communication

**KU8.** POSH Act

**KU9.** Gender sensitivity and inclusivity

**KU10.** different types of financial institutes, products, and services

**KU11.** how to compute income and expenditure

**KU12.** importance of maintaining safety and security in offline and online financial transactions

**KU13.** different legal rights and laws

**KU14.** different types of digital devices and the procedure to operate them safely and securely

**KU15.** how to create and operate an e- mail account and use applications such as word processors, spreadsheets etc.

**KU16.** how to identify business opportunities

**KU17.** types and needs of customers

**KU18.** how to apply for a job and prepare for an interview

**KU19.** apprenticeship scheme and the process of registering on apprenticeship portal

## Generic Skills (GS)

User/individual on the job needs to know how to:

**GS1.** read and write different types of documents/instructions/correspondence

**GS2.** communicate effectively using appropriate language in formal and informal settings

## Qualification Pack

- GS3.** behave politely and appropriately with all
- GS4.** how to work in a virtual mode
- GS5.** perform calculations efficiently
- GS6.** solve problems effectively
- GS7.** pay attention to details
- GS8.** manage time efficiently
- GS9.** maintain hygiene and sanitization to avoid infection

## Qualification Pack

### Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Introduction to Employability Skills</i>	<b>1</b>	<b>1</b>	-	-
<b>PC1.</b> identify employability skills required for jobs in various industries	-	-	-	-
<b>PC2.</b> identify and explore learning and employability portals	-	-	-	-
<i>Constitutional values - Citizenship</i>	<b>1</b>	<b>1</b>	-	-
<b>PC3.</b> 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.	-	-	-	-
<b>PC4.</b> follow environmentally sustainable practices	-	-	-	-
<i>Becoming a Professional in the 21st Century</i>	<b>2</b>	<b>4</b>	-	-
<b>PC5.</b> recognize the significance of 21st Century Skills for employment	-	-	-	-
<b>PC6.</b> 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>	<b>2</b>	<b>3</b>	-	-
<b>PC7.</b> use basic English for everyday conversation in different contexts, in person and over the telephone	-	-	-	-
<b>PC8.</b> read and understand routine information, notes, instructions, mails, letters etc. written in English	-	-	-	-
<b>PC9.</b> write short messages, notes, letters, e-mails etc. in English	-	-	-	-
<i>Career Development &amp; Goal Setting</i>	<b>1</b>	<b>2</b>	-	-

### Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC10.</b> understand the difference between job and career	-	-	-	-
<b>PC11.</b> prepare a career development plan with short- and long-term goals, based on aptitude	-	-	-	-
<i>Communication Skills</i>	<b>2</b>	<b>2</b>	-	-
<b>PC12.</b> follow verbal and non-verbal communication etiquette and active listening techniques in various settings	-	-	-	-
<b>PC13.</b> work collaboratively with others in a team	-	-	-	-
<i>Diversity &amp; Inclusion</i>	<b>1</b>	<b>2</b>	-	-
<b>PC14.</b> communicate and behave appropriately with all genders and PwD	-	-	-	-
<b>PC15.</b> escalate any issues related to sexual harassment at workplace according to POSH Act	-	-	-	-
<i>Financial and Legal Literacy</i>	<b>2</b>	<b>3</b>	-	-
<b>PC16.</b> select financial institutions, products and services as per requirement	-	-	-	-
<b>PC17.</b> carry out offline and online financial transactions, safely and securely	-	-	-	-
<b>PC18.</b> identify common components of salary and compute income, expenses, taxes, investments etc	-	-	-	-
<b>PC19.</b> identify relevant rights and laws and use legal aids to fight against legal exploitation	-	-	-	-
<i>Essential Digital Skills</i>	<b>3</b>	<b>4</b>	-	-
<b>PC20.</b> operate digital devices and carry out basic internet operations securely and safely	-	-	-	-
<b>PC21.</b> use e- mail and social media platforms and virtual collaboration tools to work effectively	-	-	-	-
<b>PC22.</b> use basic features of word processor, spreadsheets, and presentations	-	-	-	-

### Qualification Pack

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

## Qualification Pack

### National Occupational Standards (NOS) Parameters

<b>NOS Code</b>	DGT/VSQ/N0102
<b>NOS Name</b>	Employability Skills (60 Hours)
<b>Sector</b>	Cross Sectoral
<b>Sub-Sector</b>	Professional Skills
<b>Occupation</b>	Employability
<b>NSQF Level</b>	4
<b>Credits</b>	2
<b>Version</b>	1.0
<b>Last Reviewed Date</b>	NA
<b>Next Review Date</b>	28/02/2026
<b>NSQC Clearance Date</b>	28/02/2023

## Assessment Guidelines and Assessment Weightage

### Assessment Guidelines

1. Criteria for assessment for each Qualification Pack will be created by the Sector Skill Council. 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 Skills Practical for each PC.
2. The assessment for the theory part will be based on knowledge bank of questions created by the SSC.
3. Assessment will be conducted for all compulsory NOS, and where applicable, on the selected 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 every student at each examination/training center based on this criterion.
6. To pass the Qualification Pack, every trainee should score a minimum of 70% of aggregate marks to successfully clear the assessment.
7. In case of unsuccessful completion, the trainee may seek reassessment on the Qualification Pack.

## Qualification Pack

### Minimum Aggregate Passing % at QP Level : 70

(**Please note:** Every Trainee should score a minimum aggregate passing percentage as specified above, to successfully clear the Qualification Pack assessment.)

### Assessment Weightage

Compulsory NOS

National Occupational Standards	Theory Marks	Practical Marks	Project Marks	Viva Marks	Total Marks	Weightage
AGR/N4946.Prepare for coldwater aquaculture	30	70	-	-	100	20
AGR/N4947.Carry out coldwater aquaculture	30	70	-	-	100	40
AGR/N4948.Harvest and market fish	30	70	-	-	100	20
AGR/N4918.Ensure health, hygiene and safety during culture operations	30	40	-	30	100	15
DGT/VSQ/N0102.Employability Skills (60 Hours)	20	30	-	-	50	5
<b>Total</b>	<b>140</b>	<b>280</b>	<b>-</b>	<b>30</b>	<b>450</b>	<b>100</b>

## Qualification Pack

### Acronyms

<b>NOS</b>	National Occupational Standard(s)
<b>NSQF</b>	National Skills Qualifications Framework
<b>QP</b>	Qualifications Pack
<b>TVET</b>	Technical and Vocational Education and Training

## Qualification Pack

### Glossary

<b>Sector</b>	Sector is a conglomeration of different business operations having similar business and interests. It may also be defined as a distinct subset of the economy whose components share similar characteristics and interests.
<b>Sub-sector</b>	Sub-sector is derived from a further breakdown based on the characteristics and interests of its components.
<b>Occupation</b>	Occupation is a set of job roles, which perform similar/ related set of functions in an industry.
<b>Job role</b>	Job role defines a unique set of functions that together form a unique employment opportunity in an organisation.
<b>Occupational Standards (OS)</b>	OS specify the standards of performance an individual must achieve when carrying out a function in the workplace, together with the Knowledge and Understanding (KU) they need to meet that standard consistently. Occupational Standards are applicable both in the Indian and global contexts.
<b>Performance Criteria (PC)</b>	Performance Criteria (PC) are statements that together specify the standard of performance required when carrying out a task.
<b>National Occupational Standards (NOS)</b>	NOS are occupational standards which apply uniquely in the Indian context.
<b>Qualifications Pack (QP)</b>	QP comprises the set of OS, together with the educational, training and other criteria required to perform a job role. A QP is assigned a unique qualifications pack code.
<b>Unit Code</b>	Unit code is a unique identifier for an Occupational Standard, which is denoted by an 'N'
<b>Unit Title</b>	Unit title gives a clear overall statement about what the incumbent should be able to do.
<b>Description</b>	Description gives a short summary of the unit content. This would be helpful to anyone searching on a database to verify that this is the appropriate OS they are looking for.
<b>Scope</b>	Scope is a set of statements specifying the range of variables that an individual may have to deal with in carrying out the function which have a critical impact on quality of performance required.

## Qualification Pack

<b>Knowledge and Understanding (KU)</b>	Knowledge and Understanding (KU) are statements which together specify the technical, generic, professional and organisational specific knowledge that an individual needs in order to perform to the required standard.
<b>Organisational Context</b>	Organisational context includes the way the organisation is structured and how it operates, including the extent of operative knowledge managers have of their relevant areas of responsibility.
<b>Technical Knowledge</b>	Technical knowledge is the specific knowledge needed to accomplish specific designated responsibilities.
<b>Core Skills/ Generic Skills (GS)</b>	Core skills or Generic Skills (GS) are a group of skills that are the key to learning and working in today's world. These skills are typically needed in any work environment in today's world. These skills are typically needed in any work environment. In the context of the OS, these include communication related skills that are applicable to most job roles.
<b>Electives</b>	Electives are NOS/set of NOS that are identified by the sector as contributive to specialization in a job role. There may be multiple electives within a QP for each specialized job role. Trainees must select at least one elective for the successful completion of a QP with Electives.
<b>Options</b>	Options are NOS/set of NOS that are identified by the sector as additional skills. There may be multiple options within a QP. It is not mandatory to select any of the options to complete a QP with Options.