

Qualification Pack



Ornamental Fish Farmer

Options: Aquarium

QP Code: AGR/Q4910

Version: 3.0

NSQF Level: 4

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AGR/Q4910: Ornamental Fish Farmer

Brief Job Description

An Ornamental Fish Farmer is responsible for breeding, seed production and rearing of seeds of different types of ornamental fish of domestic and export value. The individual may also set up and maintain marine and freshwater aquariums.

Personal Attributes

The individual must be physically fit to work for long durations. The person must have a good sense of aesthetics along with the ability to plan, organise, and prioritise tasks.

Applicable National Occupational Standards (NOS)

Compulsory NOS:

1. [AGR/N4936: Carry out pond and tank preparation activities](#)
2. [AGR/N4937: Assess the feed requirements and culture live feed](#)
3. [AGR/N4938: Stock, maintain and harvest the ornamental fish](#)
4. [AGR/N9908: Undertake basic entrepreneurial activities for small enterprise](#)
5. [AGR/N4955: Follow the hygiene and safety practices in culture operations](#)
6. [DGT/VSQ/N0102: Employability Skills \(60 Hours\)](#)

Options(Not mandatory):

Option : Aquarium

This OS unit is about setting up and maintaining marine and freshwater aquariums.

1. [AGR/N4963: Set up and maintain marine and freshwater aquariums](#)

Qualification Pack (QP) Parameters

Sector	Agriculture
Sub-Sector	Fisheries

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Occupation	Aquaculture
Country	India
NSQF Level	4
Credits	15
Aligned to NCO/ISCO/ISIC Code	NCO-2015/NIL
Minimum Educational Qualification & Experience	10th Class with 2 Years of experience relevant experience OR 10th Class (Pass and pursuing continuous regular schooling) OR 8th Class with 3 Years of experience relevant experience OR 5th Class with 5 Years of experience relevant experience OR Certificate-NSQF (Level-3 with minimum education as 5th grade pass) with 2 Years of experience relevant experience
Minimum Level of Education for Training in School	
Pre-Requisite License or Training	NA
Minimum Job Entry Age	18 Years
Last Reviewed On	NA
Next Review Date	30/12/2024
NSQF Approval Date	30/12/2021
Version	3.0
Reference code on NQR	2022/AGR/ASCI/06538
NQR Version	1.0

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AGR/N4936: Carry out pond and tank preparation activities

Description

This OS unit is about the preparation of a pond and tank for ornamental fish culture.

Scope

The scope covers the following :

- Prepare the pond
- Set up the tank

Elements and Performance Criteria

Prepare the pond

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

- PC1.** co-ordinate with an authorised lab to test the level of organic matters and pH in the soil
- PC2.** 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
- PC3.** carry out de-mudding in the pond
- PC4.** drain out and sun-dry the perennial pond
- PC5.** construct dykes of recommended height at the pond
- PC6.** install inlet and outlet pipes in the pond for the efficient entry and exit of water
- PC7.** remove aquatic weed from the pond

Set up the tank

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

- PC8.** select an appropriate type of tank such as Fibre-Reinforced Plastic (FRP), Silpaulin tank, Reinforced Cement Concrete (RCC) tank according to the species and quantity of fish to be cultured
- PC9.** co-ordinate with an expert for the fabrication and installation of the tank
- PC10.** install air pumps, aerator and filters in the tank
- PC11.** install re-circulatory systems (RAS) as planned
- PC12.** fill the tank and pond with aged freshwater or seawater depending on the species to be cultured
- PC13.** apply net cover on the tanks to protect the fish from predatory birds and other external threats

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** the process of preparing a pond for fish culture
- KU2.** different types of tanks and their suitability for different types of fish

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- KU3.** the process of fabrication and installation of a tank in a pond
- KU4.** the process of installing equipment in tanks/ponds, such as air pumps, aerators, filters, etc.
- KU5.** the process of installation of the RAS system
- KU6.** the importance and ways of ensuring the optimum level of dissolved oxygen and temperature in the pond
- KU7.** the process of applying net on the pond/ tank to protect the fish from predatory birds and external threats

Generic Skills (GS)

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

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

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Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Prepare the pond</i>	16	18	-	14
PC1. co-ordinate with an authorised lab to test the level of organic matters and pH in the soil	-	-	-	-
PC2. 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	-	-	-	-
PC3. carry out de-mudding in the pond	-	-	-	-
PC4. drain out and sun-dry the perennial pond	-	-	-	-
PC5. construct dykes of recommended height at the pond	-	-	-	-
PC6. install inlet and outlet pipes in the pond for the efficient entry and exit of water	-	-	-	-
PC7. remove aquatic weed from the pond	-	-	-	-
<i>Set up the tank</i>	14	22	-	16
PC8. select an appropriate type of tank such as Fibre-Reinforced Plastic (FRP), Silpaulin tank, Reinforced Cement Concrete (RCC) tank according to the species and quantity of fish to be cultured	-	-	-	-
PC9. co-ordinate with an expert for the fabrication and installation of the tank	-	-	-	-
PC10. install air pumps, aerator and filters in the tank	-	-	-	-
PC11. install re-circulatory systems (RAS) as planned	-	-	-	-
PC12. fill the tank and pond with aged freshwater or seawater depending on the species to be cultured	-	-	-	-

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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC13. apply net cover on the tanks to protect the fish from predatory birds and other external threats	-	-	-	-
NOS Total	30	40	-	30

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National Occupational Standards (NOS) Parameters

NOS Code	AGR/N4936
NOS Name	Carry out pond and tank preparation activities
Sector	Agriculture
Sub-Sector	Fisheries
Occupation	Aquaculture
NSQF Level	4
Credits	2
Version	2.0
Last Reviewed Date	30/12/2021
Next Review Date	17/11/2025
NSQC Clearance Date	17/11/2022

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AGR/N4937: Assess the feed requirements and culture live feed

Description

This OS unit is about selecting ornamental fish to be cultured; assessing their feed requirements; preparing feed and culturing live feed.

Scope

The scope covers the following :

- Select ornamental fish and assess their feed requirements
- Procure the ingredients for preparing feed and culturing live feed
- Culture live feed

Elements and Performance Criteria

Select ornamental fish and assess their feed requirements

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

- PC1.** select suitable species of ornamental fish to be cultured based on the water quality
- PC2.** identify the nutritional and feed requirements of selected species of fish
- PC3.** determine the feeding schedule for different stages of growth of the selected species

Procure the ingredients for preparing feed and culturing live feed

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

- PC4.** select various ingredients based on the nutritional requirement of the selected species
- PC5.** identify the relevant vendors to procure the ingredients for feed and culturing live feed
- PC6.** procure the ingredients in the required quantity
- PC7.** store the ingredients at the recommended temperature and humidity to preserve their quality
- PC8.** maintain the record of purchase manually and/ or electronically

Culture live feed

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

- PC9.** stock the procured material in the culture pond to culture live feed
- PC10.** culture live feed following the recommended method
- PC11.** maintain the hygiene and quality of live feed

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** how to assess the feed requirements of different species of ornamental fish
- KU2.** feeding schedule for different stages of growth of the different ornamental fish species
- KU3.** various ingredients required for preparing feed according to the nutritional requirement of different ornamental fish species

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- KU4.** relevant ingredients required for preparing ornamental fish feed and culturing live feed
- KU5.** recommended temperature for storing fish feed and live feed ingredients
- KU6.** applicable documentation requirements
- KU7.** the process of culturing live feed and ways to maintain its hygiene and quality

Generic Skills (GS)

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

- GS1.** maintain work-related records
- GS2.** communicate politely and professionally
- GS3.** read the relevant literature to learn about the latest developments in the field of work
- GS4.** listen attentively to understand the information/ instructions being shared
- GS5.** plan and prioritise tasks to ensure timely completion
- GS6.** co-ordinate with the co-workers to achieve the work objectives
- GS7.** identify possible disruptions to work and take appropriate preventive measures

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Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Select ornamental fish and assess their feed requirements</i>	8	12	-	16
PC1. select suitable species of ornamental fish to be cultured based on the water quality	-	-	-	-
PC2. identify the nutritional and feed requirements of selected species of fish	-	-	-	-
PC3. determine the feeding schedule for different stages of growth of the selected species	-	-	-	-
<i>Procure the ingredients for preparing feed and culturing live feed</i>	16	16	-	8
PC4. select various ingredients based on the nutritional requirement of the selected species	-	-	-	-
PC5. identify the relevant vendors to procure the ingredients for feed and culturing live feed	-	-	-	-
PC6. procure the ingredients in the required quantity	-	-	-	-
PC7. store the ingredients at the recommended temperature and humidity to preserve their quality	-	-	-	-
PC8. maintain the record of purchase manually and/ or electronically	-	-	-	-
<i>Culture live feed</i>	6	12	-	6
PC9. stock the procured material in the culture pond to culture live feed	-	-	-	-
PC10. culture live feed following the recommended method	-	-	-	-
PC11. maintain the hygiene and quality of live feed	-	-	-	-
NOS Total	30	40	-	30

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National Occupational Standards (NOS) Parameters

NOS Code	AGR/N4937
NOS Name	Assess the feed requirements and culture live feed
Sector	Agriculture
Sub-Sector	Fisheries
Occupation	Aquaculture
NSQF Level	4
Credits	2
Version	2.0
Last Reviewed Date	30/12/2021
Next Review Date	17/11/2025
NSQC Clearance Date	17/11/2022

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AGR/N4938: Stock, maintain and harvest the ornamental fish

Description

This OS unit is about stocking, maintaining, harvesting and marketing ornamental fish. It also covers resources optimisation, waste management and practicing inclusion at work.

Scope

The scope covers the following :

- Procure and stock the ornamental fish seed
- Carry out feed and health management
- Manage the water quality
- Carry out fish breeding
- Harvest, condition and pack the fish
- Market the harvested fish
- Optimise resource utilisation
- Perform waste management

Elements and Performance Criteria

Procure and stock the ornamental fish seed

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

- PC1.** procure healthy seeds of the selected ornamental fish species in the required quantity
- PC2.** stock the seeds in the culture pond maintaining the recommended stocking density
- PC3.** follow the recommended prophylaxis measures to prevent disease and outbreak of harmful organisms in the tank

Carry out feed and health management

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

- PC4.** feed the stocked seeds with the required nutrients as per the recommended feeding schedule
- PC5.** apply necessary changes to feed according to the stages of fish's growth
- PC6.** identify the signs of stress and disease in the fish
- PC7.** select an appropriate treatment or consult an expert
- PC8.** apply the prescribed treatment in the recommended quantity

Manage the water quality

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

- PC9.** maintain optimum pond temperature according to the season to avoid stress to the fish
- PC10.** check that the optimum level of dissolved oxygen is present in the pond water
- PC11.** maintain the recommended levels of salinity and alkalinity according to the cultured fish species
- PC12.** carry out aeration using aerators
- PC13.** maintain optimum depth and stocking density for the cultured species

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PC14. remove the decomposing organic waste material from the pond to maintain the pH levels

PC15. check the quality of water regularly against the relevant quality parameters

Carry out fish breeding

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

PC16. undertake broodstock development

PC17. carry out breeding in the culture pond following the recommended method

PC18. stock fish in the tank when they attain the recommended growth

PC19. rear fish in the tank to a marketable size

Harvest, condition and pack the fish

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

PC20. check the fish to ensure it has achieved the maturity required for harvesting

PC21. carry out prophylactic nutrition and reduce the water level in the pond before harvesting

PC22. harvest the fish using appropriate tools and equipment, ensuring no damage to the fish

PC23. store the harvested fish at the recommended temperature and humidity

PC24. condition and starve the fish before packing

PC25. pack the fish in appropriate containers maintaining the recommended density

PC26. protect the fish from contamination while being harvested and packed

Market the harvested fish

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

PC27. identify the potential buyers of the harvested ornamental fish

PC28. negotiate the price with the selected buyer(s)

PC29. transport the fish to the buyer in the ordered quantity

PC30. process payments using the buyer-preferred e-payment method

PC31. maintain the record of sales and payments manually and/ or electronically

Optimise resource utilisation

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

PC32. optimise the usage of water and other resources in various tasks and processes

PC33. plug water leakages to prevent its wastage

Perform waste management

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

PC34. treat the wastewater for recycling by applying lime or the approved disinfectant(s)

PC35. check the quality parameters of the treated water for its suitability for re-use

PC36. utilise the recycled water for culture operations

PC37. segregate waste into appropriate categories

PC38. dispose the non-recyclable waste in an environment-friendly manner and recycle the recyclable waste appropriately

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

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- KU1.** the process of procuring and stocking ornamental fish seed
- KU2.** recommended stocking density for different varieties of ornamental fish
- KU3.** recommended prophylaxis measures to be taken to prevent disease and outbreak of harmful organisms in the pond
- KU4.** feed management for varieties of ornamental fish including the feeding recommended nutrients, feed quantity and feeding schedule according to the stages of growth
- KU5.** various signs of stress and disease in the ornamental fish and the appropriate treatment for them
- KU6.** the importance of applying the prescribed treatment in the recommended quantity
- KU7.** various water quality management practices such as maintaining the recommended levels of temperature, pH, salinity, alkalinity, dissolved oxygen, aeration, etc.
- KU8.** relevant quality parameters to be checked in the pond/ tank water
- KU9.** the process of broodstock development
- KU10.** recommended methods for breeding fish
- KU11.** the process of harvesting, conditioning and packing the fish
- KU12.** how to protect the fish from contamination while being harvested and packed
- KU13.** recommended temperature and humidity to store the fish
- KU14.** the process of connecting and negotiating with buyers
- KU15.** how to maintain records manually and electronically
- KU16.** use of various e-payment methods
- KU17.** benefits of resource optimisation
- KU18.** the process of treating wastewater for recycling with the use of lime and approved disinfectant(s)
- KU19.** different uses of recycled water in culture operations
- KU20.** different methods of recycling and disposing different types of waste
- KU21.** common sources of pollution and ways to minimise it

Generic Skills (GS)

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

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

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Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Procure and stock the ornamental fish seed</i>	4	4	-	4
PC1. procure healthy seeds of the selected ornamental fish species in the required quantity	-	-	-	-
PC2. stock the seeds in the culture pond maintaining the recommended stocking density	-	-	-	-
PC3. follow the recommended prophylaxis measures to prevent disease and outbreak of harmful organisms in the tank	-	-	-	-
<i>Carry out feed and health management</i>	6	4	-	6
PC4. feed the stocked seeds with the required nutrients as per the recommended feeding schedule	-	-	-	-
PC5. apply necessary changes to feed according to the stages of fish's growth	-	-	-	-
PC6. identify the signs of stress and disease in the fish	-	-	-	-
PC7. select an appropriate treatment or consult an expert	-	-	-	-
PC8. apply the prescribed treatment in the recommended quantity	-	-	-	-
<i>Manage the water quality</i>	4	6	-	6
PC9. maintain optimum pond temperature according to the season to avoid stress to the fish	-	-	-	-
PC10. check that the optimum level of dissolved oxygen is present in the pond water	-	-	-	-
PC11. maintain the recommended levels of salinity and alkalinity according to the cultured fish species	-	-	-	-
PC12. carry out aeration using aerators	-	-	-	-
PC13. maintain optimum depth and stocking density for the cultured species	-	-	-	-

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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC14. remove the decomposing organic waste material from the pond to maintain the pH levels	-	-	-	-
PC15. check the quality of water regularly against the relevant quality parameters	-	-	-	-
<i>Carry out fish breeding</i>	4	6	-	4
PC16. undertake broodstock development	-	-	-	-
PC17. carry out breeding in the culture pond following the recommended method	-	-	-	-
PC18. stock fish in the tank when they attain the recommended growth	-	-	-	-
PC19. rear fish in the tank to a marketable size	-	-	-	-
<i>Harvest, condition and pack the fish</i>	4	8	-	4
PC20. check the fish to ensure it has achieved the maturity required for harvesting	-	-	-	-
PC21. carry out prophylactic nutrition and reduce the water level in the pond before harvesting	-	-	-	-
PC22. harvest the fish using appropriate tools and equipment, ensuring no damage to the fish	-	-	-	-
PC23. store the harvested fish at the recommended temperature and humidity	-	-	-	-
PC24. condition and starve the fish before packing	-	-	-	-
PC25. pack the fish in appropriate containers maintaining the recommended density	-	-	-	-
PC26. protect the fish from contamination while being harvested and packed	-	-	-	-
<i>Market the harvested fish</i>	2	4	-	2
PC27. identify the potential buyers of the harvested ornamental fish	-	-	-	-
PC28. negotiate the price with the selected buyer(s)	-	-	-	-

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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC29. transport the fish to the buyer in the ordered quantity	-	-	-	-
PC30. process payments using the buyer-preferred e-payment method	-	-	-	-
PC31. maintain the record of sales and payments manually and/ or electronically	-	-	-	-
<i>Optimise resource utilisation</i>	2	4	-	2
PC32. optimise the usage of water and other resources in various tasks and processes	-	-	-	-
PC33. plug water leakages to prevent its wastage	-	-	-	-
<i>Perform waste management</i>	4	4	-	2
PC34. treat the wastewater for recycling by applying lime or the approved disinfectant(s)	-	-	-	-
PC35. check the quality parameters of the treated water for its suitability for re-use	-	-	-	-
PC36. utilise the recycled water for culture operations	-	-	-	-
PC37. segregate waste into appropriate categories	-	-	-	-
PC38. dispose the non-recyclable waste in an environment-friendly manner and recycle the recyclable waste appropriately	-	-	-	-
NOS Total	30	40	-	30

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National Occupational Standards (NOS) Parameters

NOS Code	AGR/N4938
NOS Name	Stock, maintain and harvest the ornamental fish
Sector	Agriculture
Sub-Sector	Fisheries
Occupation	Aquaculture
NSQF Level	4
Credits	2
Version	3.0
Last Reviewed Date	NA
Next Review Date	17/11/2025
NSQC Clearance Date	17/11/2022

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AGR/N9908: Undertake basic entrepreneurial activities for small enterprise

Description

This OS unit is about undertaking basic entrepreneurial or business activities in the agriculture sector.

Scope

The scope covers the following :

- Plan the agricultural enterprise/ business
- Manage the agricultural production process
- Manage the post-production and marketing processes

Elements and Performance Criteria

Plan the agricultural enterprise/ business

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

- PC1.** analyse the demand and supply of the relevant agricultural produce in the market
- PC2.** identify the target customers and assess their needs and expectations with respect to the quality and price of the produce
- PC3.** identify various types of agricultural entrepreneurship/ business opportunities
- PC4.** plan agricultural production with the use of relevant and efficient technologies for availing funds
- PC5.** identify appropriate and authentic advisory services/Government authority for skill upgradation to successfully plan and implement business activities
- PC6.** prepare a basic business plan for the agricultural entrepreneurship/business activities
- PC7.** identify appropriate sources of funding for the agricultural entrepreneurship/ business
- PC8.** coordinate with the relevant government authorities to subscribe to the relevant government schemes and programs to benefit from them
- PC9.** ensure compliance with the government structural reforms and framework along with the applicable rules and regulations while setting up the agricultural enterprise/ business

Manage the agricultural production process

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

- PC10.** select and arrange the necessary resources for the business operations
- PC11.** ensure the use of relevant and efficient production technologies as per planning and availability of funds
- PC12.** follow the recommended practices for efficient input resource management
- PC13.** optimise the production processes and output through the amalgamation of existing practices with smart technologies
- PC14.** follow the recommended sustainability practices during agricultural production to prevent adverse impacts on the environment and produce viz. deforestation, loss of biodiversity, soil degradation, etc.

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Manage the post-production and marketing processes

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

- PC15.** ensure the availability of proper storage infrastructures and facilities post-production of the produce as per the industry quality standards
- PC16.** collect information related to the wholesale and retail price of produce
- PC17.** calculate the costs incurred and determine the price of the produce for profitability
- PC18.** ensure that the cost of production, transportation, and marketing are considered while calculating the cost and setting the price for the produce
- PC19.** collect information related to various subsidies/funds offered by the government, authorised state units and other financial institutions involved with the promotion of the produce
- PC20.** select appropriate marketing channels for the produce, considering the relevant requirements and constraints
- PC21.** identify various risks to production and post-production processes and manage them appropriately
- PC22.** undertake outreach programs to promote agricultural products and services, and expand agri-business
- PC23.** prepare and execute a marketing plan considering the 4Ps i.e. product, price, promotion, and place and 4As i.e. acceptability, affordability, accessibility, and awareness
- PC24.** use the relevant digital services such as e-commerce, e-payments, electronic record-keeping, etc.
- PC25.** use efficient post-production logistics means to improve the supply quantity, reduce the cost to the consumer, and increase demand consequently
- PC26.** ensure all the relevant information such as quality and quantity of produce, date of manufacture, batch number, and sale is recorded electronically and/ or manually
- PC27.** coordinate with the various stakeholders for efficient and sustainable agri-business growth and development

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** how to analyse the demand and supply of the relevant agricultural produce in the market
- KU2.** the process of identifying the target customers and assess their needs and expectations with respect to the quality and price of the produce
- KU3.** how to identify various types of agricultural entrepreneurship/ business opportunities
- KU4.** how to prepare a basic business plan for the agricultural entrepreneurship/business activities
- KU5.** appropriate sources of funding for the agricultural entrepreneurship/ businesses
- KU6.** the relevant government schemes and programs
- KU7.** the importance of ensuring compliance with the government structural reforms and framework, along with the applicable rules and regulations
- KU8.** various resources required for agricultural production
- KU9.** the process of planning agricultural production and the use of relevant technologies to enhance production

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- KU10.** the importance of ensuring no cause adverse impact on the environment and produce during production
- KU11.** the recommended practices to be followed for efficient input resource management
- KU12.** the process of optimising the production processes and output through the amalgamation of existing practices with smart technologies
- KU13.** the recommended sustainability practices to be followed during agricultural production to prevent and deal with deforestation, loss of biodiversity, soil degradation, etc.
- KU14.** how to collect information related to the wholesale and retail price of agricultural produce
- KU15.** how to calculate the economics of the produce viz. production cost, price of the produce, B:C Ratio etc.
- KU16.** relevant government schemes with the provision of subsidies/funds for the promotion of agricultural produce
- KU17.** the process of selecting appropriate marketing channels for marketing agricultural produce, and the applicable requirements and constraints
- KU18.** the relevant buyers of different types of agricultural produce such as co-operatives, retailers, local vendors, wholesalers, e-trading portals, marketing companies, exporters, etc.
- KU19.** how to identify and manage various risks to production and post-production processes
- KU20.** how to undertake outreach programs to promote agricultural products and services, and expand agri-business
- KU21.** the 4Ps i.e. product, price, promotion, and place and 4As i.e. acceptability, affordability, accessibility, and awareness considered while preparing and executing a marketing plan
- KU22.** use of the relevant digital services such as e-commerce, e-payments, electronic record-keeping, etc.
- KU23.** the importance of using efficient post-production logistics
- KU24.** the importance of maintaining various records accurately

Generic Skills (GS)

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

- GS1.** maintain work-related notes and records
- GS2.** read the relevant literature to get the latest updates about the field work
- GS3.** communicate politely and professionally
- GS4.** listen attentively to understand the information being shared
- GS5.** plan and schedule tasks for efficient time management
- GS6.** identify possible disruptions to work and take appropriate preventive measures
- GS7.** take quick decisions to deal with workplace emergencies/ accident
- GS8.** evaluate all possible solutions to a problem to select the best one

Qualification Pack

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Plan the agricultural enterprise/ business</i>	10	14	-	10
PC1. analyse the demand and supply of the relevant agricultural produce in the market	-	-	-	-
PC2. identify the target customers and assess their needs and expectations with respect to the quality and price of the produce	-	-	-	-
PC3. identify various types of agricultural entrepreneurship/ business opportunities	-	-	-	-
PC4. plan agricultural production with the use of relevant and efficient technologies for availing funds	-	-	-	-
PC5. identify appropriate and authentic advisory services/Government authority for skill upgradation to successfully plan and implement business activities	-	-	-	-
PC6. prepare a basic business plan for the agricultural entrepreneurship/business activities	-	-	-	-
PC7. identify appropriate sources of funding for the agricultural entrepreneurship/ business	-	-	-	-
PC8. coordinate with the relevant government authorities to subscribe to the relevant government schemes and programs to benefit from them	-	-	-	-
PC9. ensure compliance with the government structural reforms and framework along with the applicable rules and regulations while setting up the agricultural enterprise/ business	-	-	-	-
<i>Manage the agricultural production process</i>	8	10	-	8
PC10. select and arrange the necessary resources for the business operations	-	-	-	-
PC11. ensure the use of relevant and efficient production technologies as per planning and availability of funds	-	-	-	-

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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC12. follow the recommended practices for efficient input resource management	-	-	-	-
PC13. optimise the production processes and output through the amalgamation of existing practices with smart technologies	-	-	-	-
PC14. follow the recommended sustainability practices during agricultural production to prevent adverse impacts on the environment and produce viz. deforestation, loss of biodiversity, soil degradation, etc.	-	-	-	-
<i>Manage the post-production and marketing processes</i>	12	16	-	12
PC15. ensure the availability of proper storage infrastructures and facilities post-production of the produce as per the industry quality standards	-	-	-	-
PC16. collect information related to the wholesale and retail price of produce	-	-	-	-
PC17. calculate the costs incurred and determine the price of the produce for profitability	-	-	-	-
PC18. ensure that the cost of production, transportation, and marketing are considered while calculating the cost and setting the price for the produce	-	-	-	-
PC19. collect information related to various subsidies/funds offered by the government, authorised state units and other financial institutions involved with the promotion of the produce	-	-	-	-
PC20. select appropriate marketing channels for the produce, considering the relevant requirements and constraints	-	-	-	-
PC21. identify various risks to production and post-production processes and manage them appropriately	-	-	-	-
PC22. undertake outreach programs to promote agricultural products and services, and expand agri-business	-	-	-	-

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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC23. prepare and execute a marketing plan considering the 4Ps i.e. product, price, promotion, and place and 4As i.e. acceptability, affordability, accessibility, and awareness	-	-	-	-
PC24. use the relevant digital services such as e-commerce, e-payments, electronic record-keeping, etc.	-	-	-	-
PC25. use efficient post-production logistics means to improve the supply quantity, reduce the cost to the consumer, and increase demand consequently	-	-	-	-
PC26. ensure all the relevant information such as quality and quantity of produce, date of manufacture, batch number, and sale is recorded electronically and/ or manually	-	-	-	-
PC27. coordinate with the various stakeholders for efficient and sustainable agri-business growth and development	-	-	-	-
NOS Total	30	40	-	30

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National Occupational Standards (NOS) Parameters

NOS Code	AGR/N9908
NOS Name	Undertake basic entrepreneurial activities for small enterprise
Sector	Agriculture
Sub-Sector	Generic
Occupation	Generic
NSQF Level	4
Credits	1
Version	3.0
Last Reviewed Date	NA
Next Review Date	25/02/2024
NSQC Clearance Date	25/02/2021

Qualification Pack

AGR/N4955: Follow the hygiene and safety practices in culture operations

Description

This OS unit is about following various hygiene and safety practices during culture operations.

Scope

The scope covers the following :

- Maintain the water body and its hygiene
- Maintain the health of cultured organisms
- Maintain personal health and safety

Elements and Performance Criteria

Maintain the water body and its hygiene

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

- PC1.** follow the recommended practices to protect the aquaculture farm from different types of threats such as storms, predatory birds, harmful organisms, poachers, etc.
- PC2.** carry out regular maintenance of the dykes and fences in the culture pond
- PC3.** identify and remove the preying organisms from the culture pond or tank
- PC4.** remove sludge, algae, uneaten feed and any other waste materials from the culture pond or tank
- PC5.** apply the necessary disinfectants or preventive treatment in the culture pond or tank to prevent disease outbreak and the growth of harmful organisms

Maintain the health of cultured organisms

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

- PC6.** follow the recommended practices to protect the cultured organisms from the air, water or fomite-borne contamination and diseases
- PC7.** sample the cultured organisms regularly to identify the signs of stress/ disease/ phenotypic disorders and the presence of parasites and pathogens
- PC8.** identify, quarantine and treat the unhealthy organisms following the recommended practices
- PC9.** monitor the quarantined organisms for signs of improvement and restock them in the culture pond or tank on complete recovery
- PC10.** remove the dead and moribund organisms and dispose them in an environment-friendly manner

Maintain personal health and safety

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

- PC11.** check the relevant Personal Protective Equipment (PPE) before use and repair or replace it, as required
- PC12.** use the relevant PPE during various aquaculture operations such as the application of hazardous chemicals
- PC13.** use the recommended soap or sanitiser to keep hands sanitised

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- PC14.** store hazardous chemicals, tools and equipment in the safe storage area to avoid personal harm or injury
- PC15.** administer first-aid to the injured personnel and co-ordinate with the emergency services for further medical attention

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** how to protect the aquaculture farm and cultured species from various threats
- KU2.** the process of identifying and removing predators or preying organisms from the culture pond or tank
- KU3.** the importance and process of carrying out regular cleaning of the culture pond or tank to remove sludge, algae, uneaten feed, etc.
- KU4.** the recommended disinfectants for water bodies and the process of applying them to prevent disease outbreak and growth of harmful organisms
- KU5.** recommended practices to protect the cultured organisms from air/ water/ fomite-borne contamination and diseases during and after harvesting
- KU6.** the process of sampling the cultured organisms to identify disease, disorders and presence of parasites and pathogens
- KU7.** the signs of stress or disease in the cultured organisms such as spots, lesions, erratic movement, etc.
- KU8.** the process of identifying, quarantining and treating the unhealthy organisms
- KU9.** the signs of improvement in the quarantined organisms
- KU10.** the importance of removing the dead and moribund organisms from the water body promptly and disposing them safely
- KU11.** the importance of using the relevant PPE and ensuring it is damage-free
- KU12.** appropriate practices to be followed to maintain personal hygiene and prevent infections
- KU13.** the importance of storing hazardous chemicals, tools and equipment safely
- KU14.** how to administer first-aid and co-ordinate with emergency services

Generic Skills (GS)

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

- GS1.** maintain work-related notes and records
- GS2.** read the relevant guidelines and safety instruction in the local language/ English
- GS3.** listen attentively to understand the information/ instructions being given
- GS4.** communicate politely and professionally
- GS5.** co-ordinate with the co-workers to achieve the work objectives
- GS6.** evaluate all the possible solutions to a problem to select the best one
- GS7.** take quick decisions within the limits of authority to resolve work-related issues
- GS8.** plan and schedule tasks to ensure timely completion

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Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Maintain the water body and its hygiene</i>	10	15	-	10
PC1. follow the recommended practices to protect the aquaculture farm from different types of threats such as storms, predatory birds, harmful organisms, poachers, etc.	-	-	-	-
PC2. carry out regular maintenance of the dykes and fences in the culture pond	-	-	-	-
PC3. identify and remove the preying organisms from the culture pond or tank	-	-	-	-
PC4. remove sludge, algae, uneaten feed and any other waste materials from the culture pond or tank	-	-	-	-
PC5. apply the necessary disinfectants or preventive treatment in the culture pond or tank to prevent disease outbreak and the growth of harmful organisms	-	-	-	-
<i>Maintain the health of cultured organisms</i>	10	15	-	10
PC6. follow the recommended practices to protect the cultured organisms from the air, water or fomite-borne contamination and diseases	-	-	-	-
PC7. sample the cultured organisms regularly to identify the signs of stress/ disease/ phenotypic disorders and the presence of parasites and pathogens	-	-	-	-
PC8. identify, quarantine and treat the unhealthy organisms following the recommended practices	-	-	-	-
PC9. monitor the quarantined organisms for signs of improvement and restock them in the culture pond or tank on complete recovery	-	-	-	-
PC10. remove the dead and moribund organisms and dispose them in an environment-friendly manner	-	-	-	-
<i>Maintain personal health and safety</i>	10	10	-	10

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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC11. check the relevant Personal Protective Equipment (PPE) before use and repair or replace it, as required	-	-	-	-
PC12. use the relevant PPE during various aquaculture operations such as the application of hazardous chemicals	-	-	-	-
PC13. use the recommended soap or sanitiser to keep hands sanitised	-	-	-	-
PC14. store hazardous chemicals, tools and equipment in the safe storage area to avoid personal harm or injury	-	-	-	-
PC15. administer first-aid to the injured personnel and co-ordinate with the emergency services for further medical attention	-	-	-	-
NOS Total	30	40	-	30

Qualification Pack

National Occupational Standards (NOS) Parameters

NOS Code	AGR/N4955
NOS Name	Follow the hygiene and safety practices in culture operations
Sector	Agriculture
Sub-Sector	Fisheries
Occupation	Aquaculture
NSQF Level	4
Credits	1
Version	2.0
Last Reviewed Date	NA
Next Review Date	24/02/2025
NSQC Clearance Date	24/02/2022

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:

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- 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.

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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

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- 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

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Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Introduction to Employability Skills</i>	1	1	-	-
PC1. identify employability skills required for jobs in various industries	-	-	-	-
PC2. identify and explore learning and employability portals	-	-	-	-
<i>Constitutional values - Citizenship</i>	1	1	-	-
PC3. recognize the significance of constitutional values, including civic rights and duties, citizenship, responsibility towards society etc. and personal values and ethics such as honesty, integrity, caring and respecting others, etc.	-	-	-	-
PC4. follow environmentally sustainable practices	-	-	-	-
<i>Becoming a Professional in the 21st Century</i>	2	4	-	-
PC5. recognize the significance of 21st Century Skills for employment	-	-	-	-
PC6. practice the 21st Century Skills such as Self-Awareness, Behaviour Skills, time management, critical and adaptive thinking, problem-solving, creative thinking, social and cultural awareness, emotional awareness, learning to learn for continuous learning etc. in personal and professional life	-	-	-	-
<i>Basic English Skills</i>	2	3	-	-
PC7. use basic English for everyday conversation in different contexts, in person and over the telephone	-	-	-	-
PC8. read and understand routine information, notes, instructions, mails, letters etc. written in English	-	-	-	-
PC9. write short messages, notes, letters, e-mails etc. in English	-	-	-	-
<i>Career Development & Goal Setting</i>	1	2	-	-

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

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

Qualification Pack

National Occupational Standards (NOS) Parameters

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

Qualification Pack

AGR/N4963: Set up and maintain marine and freshwater aquariums

Description

This OS unit is about setting up and maintaining marine and freshwater aquariums along with stocking and maintaining appropriate type of fish in them.

Scope

The scope covers the following :

- Set up the marine/ freshwater aquarium
- Stock and feed the fish
- Maintain the aquarium and water quality
- Carry out health and disease management

Elements and Performance Criteria

Set up the marine/ freshwater aquarium

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

- PC1.** arrange the necessary resources to set up the marine/ freshwater aquarium such as aquarium tank, air pump, protein skimmer, heater and thermometer, etc.
- PC2.** sanitise and acclimatise the relevant items before setting up in the aquarium to avoid contamination
- PC3.** set up the aquarium structure by assembling and installing the required components such as reef, rocks, pebbles, etc.
- PC4.** install timers to automate the functioning of lights, filtration pumps and heating system
- PC5.** follow the safety guidelines in setting up the marine and freshwater aquariums including electrical connections

Stock and feed the fish

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

- PC6.** fill in the aquarium with the recommended quantity of treated water for the selected species
- PC7.** stock the selected varieties of aquarium fish maintaining the recommended stocking density
- PC8.** acclimatise the fish before stocking in the aquarium and take appropriate measures to protect them from new tank syndrome
- PC9.** feed the aquarium fish with nutritionally-balanced feed in the recommended quantity as per the feeding schedule

Maintain the aquarium and water quality

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

- PC10.** maintain the recommended percentage and frequency of water exchange/ replacement in the aquarium
- PC11.** stock organisms in the aquarium that help in cleaning the reef system by consuming ectoparasites and feed residues
- PC12.** carry out regular sampling of the water to ensure the recommended levels of pH, ammonia, nitrite and salinity

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- PC13.** monitor the reef system in the aquarium for parasites and any undesirable growth that may threaten the balance of the reef system
- PC14.** check the protein skimmers and filtration equipment for correct functioning to ensure efficient removal of waste matters and optimum water quality in the aquarium
- PC15.** carry out regular cleaning of the aquarium to remove feed residue and any waste materials

Carry out health and disease management

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

- PC16.** identify the symptoms of stress and common diseases among the aquarium fish
- PC17.** identify and quarantine the diseased or dying fish
- PC18.** treat the quarantined fish with the prescribed treatment
- PC19.** monitor the quarantined fish for signs of improvement and restock them with the aquarium fish once cured

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** various resources required to set up a marine/ freshwater aquarium such as aquarium tank, air pump, protein skimmer, heater and thermometer, etc.
- KU2.** the importance and process of sanitising the aquarium and the relevant components before assembling
- KU3.** the process of acclimatising the fish and reef before being placed in the aquarium
- KU4.** the process of setting up a marine/ freshwater aquarium
- KU5.** how to install timers to automate the functioning of lights, filtration pumps and heating system
- KU6.** the recommended quantity of treated water to be maintained in an aquarium for varieties of aquarium fish
- KU7.** recommended stocking density to be maintained for varieties of aquarium fish
- KU8.** nutrition and feed requirements of different types of aquarium fish and their recommended feeding schedule
- KU9.** the importance of maintaining the recommended percentage and frequency of water exchange in the aquarium
- KU10.** the benefits and process of stocking organisms in the aquarium that consume ectoparasites and feed residues
- KU11.** the process of sampling aquarium water to check the pH, ammonia, nitrite and salinity levels
- KU12.** appropriate measures to be taken to prevent the growth of parasites and undesirable growth in the aquarium
- KU13.** the importance of using protein skimmers and filtration equipment to ensure the removal of waste matter and optimum water quality in the aquarium
- KU14.** various health and disease management practices for fish such as identification of the symptoms of stress and common diseases, quarantining and treating the diseased or dying fish, monitoring the quarantined fish for signs of improvement, etc.

Generic Skills (GS)

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

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

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Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Set up the marine/ freshwater aquarium</i>	8	12	-	6
PC1. arrange the necessary resources to set up the marine/ freshwater aquarium such as aquarium tank, air pump, protein skimmer, heater and thermometer, etc.	-	-	-	-
PC2. sanitise and acclimatise the relevant items before setting up in the aquarium to avoid contamination	-	-	-	-
PC3. set up the aquarium structure by assembling and installing the required components such as reef, rocks, pebbles, etc.	-	-	-	-
PC4. install timers to automate the functioning of lights, filtration pumps and heating system	-	-	-	-
PC5. follow the safety guidelines in setting up the marine and freshwater aquariums including electrical connections	-	-	-	-
<i>Stock and feed the fish</i>	6	8	-	8
PC6. fill in the aquarium with the recommended quantity of treated water for the selected species	-	-	-	-
PC7. stock the selected varieties of aquarium fish maintaining the recommended stocking density	-	-	-	-
PC8. acclimatise the fish before stocking in the aquarium and take appropriate measures to protect them from new tank syndrome	-	-	-	-
PC9. feed the aquarium fish with nutritionally-balanced feed in the recommended quantity as per the feeding schedule	-	-	-	-
<i>Maintain the aquarium and water quality</i>	8	10	-	10
PC10. maintain the recommended percentage and frequency of water exchange/ replacement in the aquarium	-	-	-	-

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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC11. stock organisms in the aquarium that help in cleaning the reef system by consuming ectoparasites and feed residues	-	-	-	-
PC12. carry out regular sampling of the water to ensure the recommended levels of pH, ammonia, nitrite and salinity	-	-	-	-
PC13. monitor the reef system in the aquarium for parasites and any undesirable growth that may threaten the balance of the reef system	-	-	-	-
PC14. check the protein skimmers and filtration equipment for correct functioning to ensure efficient removal of waste matters and optimum water quality in the aquarium	-	-	-	-
PC15. carry out regular cleaning of the aquarium to remove feed residue and any waste materials	-	-	-	-
<i>Carry out health and disease management</i>	8	10	-	6
PC16. identify the symptoms of stress and common diseases among the aquarium fish	-	-	-	-
PC17. identify and quarantine the diseased or dying fish	-	-	-	-
PC18. treat the quarantined fish with the prescribed treatment	-	-	-	-
PC19. monitor the quarantined fish for signs of improvement and restock them with the aquarium fish once cured	-	-	-	-
NOS Total	30	40	-	30

Qualification Pack

National Occupational Standards (NOS) Parameters

NOS Code	AGR/N4963
NOS Name	Set up and maintain marine and freshwater aquariums
Sector	Agriculture
Sub-Sector	Fisheries
Occupation	Aquaculture
NSQF Level	4
Credits	2
Version	1.0
Last Reviewed Date	30/12/2021
Next Review Date	17/11/2025
NSQC Clearance Date	17/11/2022

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) (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. Individual assessment agencies will create unique question papers for theory part for each candidate at each examination/training center (as per assessment criteria below).
4. Individual assessment agencies will create unique evaluations for skill practical for every student at each examination/ training center based on these criteria.
5. In case of successfully passing only certain number of NOSs, the trainee is eligible to take subsequent assessment on the balance NOS's to pass the Qualification Pack.
6. In case of unsuccessful completion, the trainee may seek reassessment on the Qualification Pack

Minimum Aggregate Passing % at QP Level : 70

Qualification Pack

(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/N4936.Carry out pond and tank preparation activities	30	40	-	30	100	30
AGR/N4937.Assess the feed requirements and culture live feed	30	40	-	30	100	25
AGR/N4938.Stock, maintain and harvest the ornamental fish	30	40	0	30	100	30
AGR/N9908.Undertake basic entrepreneurial activities for small enterprise	30	40	-	30	100	5
AGR/N4955.Follow the hygiene and safety practices in culture operations	30	40	-	30	100	5
DGT/VSQ/N0102.Employability Skills (60 Hours)	20	30	0	0	50	5
Total	170	230	0	0	550	100

Optional: 1 Aquarium

National Occupational Standards	Theory Marks	Practical Marks	Project Marks	Viva Marks	Total Marks	Weightage
AGR/N4963.Set up and maintain marine and freshwater aquariums	30	40	-	30	100	10
Total	30	40	-	30	100	10

Qualification Pack

Acronyms

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

Qualification Pack

Glossary

Sector	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.
Sub-sector	Sub-sector is derived from a further breakdown based on the characteristics and interests of its components.
Occupation	Occupation is a set of job roles, which perform similar/ related set of functions in an industry.
Job role	Job role defines a unique set of functions that together form a unique employment opportunity in an organisation.
Occupational Standards (OS)	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.
Performance Criteria (PC)	Performance Criteria (PC) are statements that together specify the standard of performance required when carrying out a task.
National Occupational Standards (NOS)	NOS are occupational standards which apply uniquely in the Indian context.
Qualifications Pack (QP)	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.
Unit Code	Unit code is a unique identifier for an Occupational Standard, which is denoted by an 'N'
Unit Title	Unit title gives a clear overall statement about what the incumbent should be able to do.
Description	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.
Scope	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

Knowledge and Understanding (KU)	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.
Organisational Context	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.
Technical Knowledge	Technical knowledge is the specific knowledge needed to accomplish specific designated responsibilities.
Core Skills/ Generic Skills (GS)	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.
Electives	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.
Options	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.