Seed Analysis In-charge

QP Code: AGR/Q7103

Version: 3.0

NSQF Level: 5

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

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AGR/Q7103: Seed Analysis In-charge

Brief Job Description

A Seed Analysis In-charge is responsible for supervising a variety of tests on seeds received in the laboratory. The person also ensures the readiness of the lab and lab equipment for conducting the tests.

Personal Attributes

The individual must have attention to detail and the ability to lead a team. The person must also have problem-solving and good communication skills.

Applicable National Occupational Standards (NOS)

Compulsory NOS:

1. AGR/N7110: Supervise the preparation of the lab, lab equipment and reagents

2. AGR/N7112: Supervise the sampling and testing of seeds

3. AGR/N7113: Supervise the maintenance of seed analysis records

4. AGR/N9911: Ensure adherence to health and safety guidelines at work

5. AGR/N9923: Manage and lead a team effectively

6. DGT/VSQ/N0103: Employability Skills (90 Hours)

Qualification Pack (QP) Parameters

Sector	Agriculture
Sub-Sector	Agriculture Industries
Occupation	Seed Production and Processing
Country	India
NSQF Level	5
Credits	16
Aligned to NCO/ISCO/ISIC Code	NCO-2015/NIL

Minimum Educational Qualification & Experience	Completed 2nd year of UG (UG Diploma) OR Pursuing 2nd year of UG (and continuous education) OR Completed 2nd year diploma after 12th OR Pursuing 2nd year of 2-year diploma after 12th OR 12th pass with 1 year Vocational Education & training (NTC or NAC or CITS) OR Completed 3 year diploma after 10th with 1 Year of experience relevant experience OR 12th grade Pass with 2 Years of experience relevant experience OR 10th grade pass with 4 Years of experience relevant experience OR Previous relevant Qualification of NSQF Level (Level 4 and with minimum education as 8th Grade pass) with 3 Years of experience relevant experience OR Previous relevant Qualification of NSQF Level (Level 4.5 with 1.5- year relevant experience)
Minimum Level of Education for Training in School	
Pre-Requisite License or Training	NA
Minimum Job Entry Age	21 Years
Last Reviewed On	NA
Next Review Date	30/12/2024
NSQC Approval Date	30/12/2021
Version	3.0
Reference code on NQR	QG-05-AG-00308-2023-V1.1-ASCI
NQR Version	1.1

AGR/N7110: Supervise the preparation of the lab, lab equipment and reagents

Description

This OS unit is about supervising the preparation of the lab, relevant lab equipment and reagents for conducting seed analysis. It also covers supervising the maintenance of lab equipment.

Scope

The scope covers the following :

- Supervise the preparation of lab for seed testing
- Supervise calibration and maintenance of the lab equipment
- Supervise the preparation of reagents
- Manage the lab inventory

Elements and Performance Criteria

Supervise the preparation of lab for seed testing

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

PC1. instruct the lab technician to apply the approved sanitiser/ disinfectant to sanitise the lab equipment, PPE and the lab

PC2. ensure the lab has appropriate temperature and lighting conditions to conduct seed testing

PC3. ensure all consumables and flammable items are removed from the lab

PC4. arrange for the safe disposal of expired chemicals and solutions

PC5. ensure the availability of physical registers/ a computer system to record the test observations

Supervise calibration and maintenance of the lab equipment

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

PC6. instruct the lab technician to calibrate and handle the lab equipment as per the manufacturer and lab guidelines

PC7. co-ordinate with the manufacturer for the calibration of equipment requiring expert assistance

PC8. ensure labels are applied on the calibrated lab equipment for the purpose of identification

PC9. arrange for periodical maintenance of the lab equipment as per the maintenance schedule

Supervise the preparation of reagents

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

PC10. arrange the necessary chemicals, solvents, acids and distilled water for the preparation of reagents

PC11. instruct the lab technician to measure the necessary chemicals, solvents and acids using the measuring jars for preparing reagents

PC12. ensure the usage of the relevant calibrated equipment for the preparation of reagents

PC13. ensure that the chemicals, solvents, acids and distilled water are mixed in the recommended ratio

PC14. instruct the lab technician to use the relevant heating/ cooling equipment to heat/ cool the mixture

PC15. arrange for the prepared reagents to be stored in the required temperature and humidity

Manage the lab inventory

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

PC16. check the lab has the required lab equipment, Personal Protective Equipment (PPE) and necessary resources such as chemicals, solvents, acids and distilled water to carry out seed testing

PC17. identify the worn-out or damaged lab equipment and PPE

PC18. select a vendor to procure the lab equipment, PPE and resources

PC19. purchase the required lab equipment, PPE and resources as per the requirement and in a timely manner to ensure uninterrupted lab operations

PC20. use the relevant computer application to manage the lab inventory

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

KU1. various lab equipment required for seed analysis

KU2. use of the approved sanitisers to sanitise the lab equipment

KU3. recommended disinfectants and their safe use in a lab environment

KU4. necessary precautions to be taken in a lab such as removal of flammables and expired chemicals/ solutions

KU5. relevant calibrations required in the lab equipment before use

KU6. necessary precautions to be taken in a lab such as removal of flammables and expired chemicals/ solutions

KU7. the maintenance schedule for various lab equipment

KU8. various chemicals, solvents, acids tools and equipment used to prepare different reagents used in seed testing

KU9. the appropriate ratio of chemicals, solvents, acids and distilled water to maintain in different types of reagents

KU10. appropriate temperature and humidity for storing different types of reagents

KU11. basic inventory management

Generic Skills (GS)

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

GS1. write work-related notes

GS2. read relevant literature to get updated information about the field of work

GS3. communicate clearly and politely

GS4. listen attentively to understand the information/ instructions being given

GS5. identify possible disruptions to work and take appropriate preventive measures within the limits of authority

GS6. evaluate multiple solutions to a problem before selecting the best one

GS7. plan and prioritise tasks to ensure timely completion

GS8. take quick decisions to deal with workplace emergencies/ accidents

GS9. co-ordinate with the co-workers to achieve the work objectives

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Supervise the preparation of lab for seed testing	**10**	**12**	**-**	**10**
PC1. instruct the lab technician to apply the approved sanitiser/ disinfectant to sanitise the lab equipment, PPE and the lab	-	-	-	-
PC2. ensure the lab has appropriate temperature and lighting conditions to conduct seed testing	-	-	-	-
PC3. ensure all consumables and flammable items are removed from the lab	-	-	-	-
PC4. arrange for the safe disposal of expired chemicals and solutions	-	-	-	-
PC5. ensure the availability of physical registers/ a computer system to record the test observations	-	-	-	-
Supervise calibration and maintenance of the lab equipment	**8**	**10**	**-**	**8**
PC6. instruct the lab technician to calibrate and handle the lab equipment as per the manufacturer and lab guidelines	-	-	-	-
PC7. co-ordinate with the manufacturer for the calibration of equipment requiring expert assistance	-	-	-	-
PC8. ensure labels are applied on the calibrated lab equipment for the purpose of identification	-	-	-	-
PC9. arrange for periodical maintenance of the lab equipment as per the maintenance schedule	-	-	-	-
Supervise the preparation of reagents	**8**	**10**	**-**	**8**
PC10. arrange the necessary chemicals, solvents, acids and distilled water for the preparation of reagents	-	-	-	-
PC11. instruct the lab technician to measure the necessary chemicals, solvents and acids using the measuring jars for preparing reagents	-	-	-	-

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC12. ensure the usage of the relevant calibrated equipment for the preparation of reagents	-	-	-	-
PC13. ensure that the chemicals, solvents, acids and distilled water are mixed in the recommended ratio	-	-	-	-
PC14. instruct the lab technician to use the relevant heating/ cooling equipment to heat/ cool the mixture	-	-	-	-
PC15. arrange for the prepared reagents to be stored in the required temperature and humidity	-	-	-	-
Manage the lab inventory	**4**	**8**	**-**	**4**
PC16. check the lab has the required lab equipment, Personal Protective Equipment (PPE) and necessary resources such as chemicals, solvents, acids and distilled water to carry out seed testing	-	-	-	-
PC17. identify the worn-out or damaged lab equipment and PPE	-	-	-	-
PC18. select a vendor to procure the lab equipment, PPE and resources	-	-	-	-
PC19. purchase the required lab equipment, PPE and resources as per the requirement and in a timely manner to ensure uninterrupted lab operations	-	-	-	-
PC20. use the relevant computer application to manage the lab inventory	-	-	-	-
NOS Total	**30**	**40**	**-**	**30**

National Occupational Standards (NOS) Parameters

NOS Code	AGR/N7110
NOS Name	Supervise the preparation of the lab, lab equipment and reagents
Sector	Agriculture
Sub-Sector	Agriculture Industries
Occupation	Seed Production and Processing
NSQF Level	5
Credits	2
Version	2.0
Last Reviewed Date	30/12/2021
Next Review Date	30/12/2024
NSQC Clearance Date	30/12/2021

AGR/N7112: Supervise the sampling and testing of seeds

Description

This OS unit is about supervising sampling of seeds and varieties of tests during seed analysis.

Scope

The scope covers the following :

- Oversee the sampling of seeds
- Supervise the testing of seeds
- Optimise and ensure resource utilisation
- Perform and ensure effective waste management

Elements and Performance Criteria

Oversee the sampling of seeds

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

PC1. ensure labelling of the seed lots received in the laboratory for the purpose of identification

PC2. instruct the lab assistant to check the lot for the required quantity and weight for seed analysis

PC3. ensure a sample is drawn from the lot according to the sampling guidelines

PC4. analyse the physical composition of the seeds on parameters such as colour, appearance, texture

PC5. instruct the lab assistant to segregate the sample into pure seeds, other crop seeds, weed seeds and inert matter

PC6. ensure selection of the pure seeds for analysis based on homogeneity

Supervise the testing of seeds

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

PC7. instruct the lab technician to perform the moisture test to check the level of moisture in the seeds and germination test to determine the germination potential of the seeds

PC8. ensure the lab has a conducive environment to allow the emergence and development of seedlings from the seed embryo

PC9. supervise the Tetrazolium (TZ) test to determine the viability of seeds

PC10. oversee the seed vigour test to assess the field performance potential of the seeds

PC11. instruct the lab technician to perform the genetic and varietal purity test to evaluate the genetic and varietal purity of iotechnology-derived seed varieties

PC12. supervise the seed health test to detect the presence of pathogens in the seeds

PC13. ensure the seeds found to have pathogens are discarded safely as per the laboratory procedures

Optimise and ensure resource utilisation

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

PC14. follow the recommended practices to optimise the usage of water, electricity and various materials in different tasks and processes, and ensure the lab personnel also follow them

PC15. turn off the electrical tools and equipment when not in use and ensure others do the same

Perform and ensure effective waste management

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

PC16. segregate waste into appropriate categories and ensure the lab personnel also follow the established practices regarding the same

PC17. dispose the non-recyclable waste and recycle the recyclable waste appropriately, ensuring others also do the same

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

KU1. labelling requirements for seed lots received in the laboratory for testing

KU2. sampling guidelines for drawing a sample from a seed lot

KU3. the process of screening seeds on physical characteristics such as colour, appearance, texture

KU4. the process of segregating seeds into pure seeds, other crop seeds, weed seeds and inert matter

KU5. various types of tests performed during seed testing such as moisture content test, germination test, Tetrazolium (TZ) test, vigour test, genetic and varietal purity test, etc.

KU6. appropriate conditions and the time duration required to allow the emergence and development of seedlings from the seed embryo

KU7. importance of following the environmental and ecological best practices

KU8. benefits of resource optimisation

KU9. ways of efficiently managing the usage of water/ electricity/ materials

KU10. methods of recycling and disposing different types of waste

KU11. common sources of pollution and ways to minimise it

Generic Skills (GS)

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

GS1. write work-related notes

GS2. communicate politely and professionally

GS3. read the relevant literature to know 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

GS7. identify possible disruptions to work and take appropriate preventive measures

GS8. co-ordinate with the co-workers to achieve the work objectives

GS9. evaluate all possible solutions to a problem to select the best one

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Oversee the sampling of seeds	**8**	**10**	**-**	**8**
PC1. ensure labelling of the seed lots received in the laboratory for the purpose of identification	-	-	-	-
PC2. instruct the lab assistant to check the lot for the required quantity and weight for seed analysis	-	-	-	-
PC3. ensure a sample is drawn from the lot according to the sampling guidelines	-	-	-	-
PC4. analyse the physical composition of the seeds on parameters such as colour, appearance, texture	-	-	-	-
PC5. instruct the lab assistant to segregate the sample into pure seeds, other crop seeds, weed seeds and inert matter	-	-	-	-
PC6. ensure selection of the pure seeds for analysis based on homogeneity	-	-	-	-
Supervise the testing of seeds	**12**	**14**	**-**	**12**
PC7. instruct the lab technician to perform the moisture test to check the level of moisture in the seeds and germination test to determine the germination potential of the seeds	-	-	-	-
PC8. ensure the lab has a conducive environment to allow the emergence and development of seedlings from the seed embryo	-	-	-	-
PC9. supervise the Tetrazolium (TZ) test to determine the viability of seeds	-	-	-	-
PC10. oversee the seed vigour test to assess the field performance potential of the seeds	-	-	-	-
PC11. instruct the lab technician to perform the genetic and varietal purity test to evaluate the genetic and varietal purity of iotechnology-derived seed varieties	-	-	-	-
PC12. supervise the seed health test to detect the presence of pathogens in the seeds	-	-	-	-

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC13. ensure the seeds found to have pathogens are discarded safely as per the laboratory procedures	-	-	-	-
Optimise and ensure resource utilisation	**2**	**6**	**-**	**2**
PC14. follow the recommended practices to optimise the usage of water, electricity and various materials in different tasks and processes, and ensure the lab personnel also follow them	-	-	-	-
PC15. turn off the electrical tools and equipment when not in use and ensure others do the same	-	-	-	-
Perform and ensure effective waste management	**8**	**10**	**-**	**8**
PC16. segregate waste into appropriate categories and ensure the lab personnel also follow the established practices regarding the same	-	-	-	-
PC17. dispose the non-recyclable waste and recycle the recyclable waste appropriately, ensuring others also do the same	-	-	-	-
NOS Total	**30**	**40**	**-**	**30**

Qualification Pack

National Occupational Standards (NOS) Parameters

NOS Code	AGR/N7112
NOS Name	Supervise the sampling and testing of seeds
Sector	Agriculture
Sub-Sector	Agriculture Industries
Occupation	Seed Production and Processing
NSQF Level	5
Credits	3
Version	2.0
Last Reviewed Date	30/12/2021
Next Review Date	30/12/2024
NSQC Clearance Date	30/12/2021

AGR/N7113: Supervise the maintenance of seed analysis records

Description

This OS unit is about supervising the maintenance of various records with respect to seed analysis conducted in the laboratory.

Scope

The scope covers the following :

- Supervise the maintenance of records
- Arrange for storage and review of records

Elements and Performance Criteria

Supervise the maintenance of records

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

PC1. ensure the records relevant to the seed lots such as the sample supplier information, batch number, receiving date are maintained

PC2. instruct the lab technician to record details with respect to seed sampling such as physical composition, the quantity of pure seeds, sampling procedure, etc.

PC3. ensure all the relevant records regarding the various tests performed during seed analysis such as germination, viability, Tetrazolium, vigour test are maintained

PC4. instruct the lab technician to maintain the data of various chemicals, solvents and acids used in seed tests

PC5. instruct the lab technician to maintain the record of the equipment used in seed analysis such as calibrations made to the equipment and any issues experienced with it

PC6. ensure the data with respect to the seed lots tested is recorded

Arrange for storage and review of records

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

PC7. ensure the data is stored using the electronic system used by the organisation

PC8. instruct the lab technician to create back up of the data to protect against accidental loss

PC9. review the records to ensure they are up to date

PC10. co-ordinate with the relevant personnel for the audit of the records

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

KU1. relevant seed lot details to be recorded such as details of the sample supplier, batch number, receiving date, etc.

KU2. details to be recorded with respect to seed sampling such as physical composition, the quantity of pure seeds, sampling procedure, etc.

KU3. relevant details to be recorded with respect to the various tests performed during seed analysis such as germination, viability, Tetrazolium, vigour test, etc.

KU4. record maintenance requirements with respect to the equipment used in seed analysis such as calibrations made to the equipment and issues experienced with it

KU5. the process of storing and backing up data using the relevant electronic system

KU6. importance of reviewing and auditing the records to ensure they are up to date

Generic Skills (GS)

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

GS1. maintain work-related records

GS2. read the health and safety instructions

GS3. listen attentively to understand the information being shared

GS4. communicate politely and professionally

GS5. plan and prioritise tasks to ensure timely completion

GS6. identify possible disruptions to work and take appropriate preventive measures

GS7. take quick decisions to deal with workplace emergencies/ accidents

GS8. evaluate all possible solutions to a problem to select the best one

GS9. co-ordinate with the co-workers to achieve the work objectives

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Supervise the maintenance of records	**20**	**25**	**-**	**20**
PC1. ensure the records relevant to the seed lots such as the sample supplier information, batch number, receiving date are maintained	-	-	-	-
PC2. instruct the lab technician to record details with respect to seed sampling such as physical composition, the quantity of pure seeds, sampling procedure, etc.	-	-	-	-
PC3. ensure all the relevant records regarding the various tests performed during seed analysis such as germination, viability, Tetrazolium, vigour test are maintained	-	-	-	-
PC4. instruct the lab technician to maintain the data of various chemicals, solvents and acids used in seed tests	-	-	-	-
PC5. instruct the lab technician to maintain the record of the equipment used in seed analysis such as calibrations made to the equipment and any issues experienced with it	-	-	-	-
PC6. ensure the data with respect to the seed lots tested is recorded	-	-	-	-
Arrange for storage and review of records	**10**	**15**	**-**	**10**
PC7. ensure the data is stored using the electronic system used by the organisation	-	-	-	-
PC8. instruct the lab technician to create back up of the data to protect against accidental loss	-	-	-	-
PC9. review the records to ensure they are up to date	-	-	-	-
PC10. co-ordinate with the relevant personnel for the audit of the records	-	-	-	-
NOS Total	**30**	**40**	**-**	**30**

Qualification Pack

National Occupational Standards (NOS) Parameters

NOS Code	AGR/N7113
NOS Name	Supervise the maintenance of seed analysis records
Sector	Agriculture
Sub-Sector	Agriculture Industries
Occupation	Seed Production and Processing
NSQF Level	5
Credits	2
Version	2.0
Last Reviewed Date	30/12/2021
Next Review Date	30/12/2024
NSQC Clearance Date	30/12/2021

AGR/N9911: Ensure adherence to health and safety guidelines at work

Description

This OS unit is about ensuring health and safety at the work and dealing with any emergencies or accidents.

Scope

The scope covers the following :

- Ensure health and safety
- Deal with emergencies at work

Elements and Performance Criteria

Ensure health and safety

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

PC1. follow the organisational policy to ensure personal health and safety at the work

PC2. ensure that all the co-workers use the appropriate PPE such as gloves, hairnet, mask, earplug, goggles and shoes in all the operations

PC3. conduct regular checks to ensure that PPE, emergency equipment and first-aid kit are updated and useable

PC4. arrange for the PPE, emergency equipment and first-aid kit to be updated/ replaced as required

PC5. ensure the machinery, tools, equipment and the work area are sanitised before and after the use

PC6. check that machineries, tools and equipment are used and stored safely as per the manufacturer's instructions

PC7. ensure safe handling of any hazardous materials such as chemicals and flammable objects

PC8. identify health and safety hazards at the work and take appropriate preventive measures

PC9. ensure that only authorised personnel have access to hazardous work areas

PC10. arrange for regular workplace audit to ensure safe working conditions

PC11. report any out of authority issues to the relevant authority for a timely resolution

Deal with emergencies at work

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

PC12. follow the organisational policy to deal with emergencies such as fire, accidents, disease outbreak or natural calamities

PC13. arrange for immediate medical attention for any injured personnel

PC14. ensure the safe use of emergency equipment according to the manufacturer's instructions

PC15. arrange for the emergency equipment to be repaired or replaced as required

PC16. report workplace emergencies/ accidents to the relevant authority in compliance with the organisational and regulatory requirements

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

KU1. various practices to ensure personal health and safety at the workplace

KU2. the importance of ensuring the use of PPE such as gloves, hairnet, mask, earplug, goggles and shoes at the workplace

KU3. the importance of ensuring that PPE, emergency equipment and first-aid kit at the workplace are up to date

KU4. the importance and process of sanitising various machineries, tools, equipment and the work before and after the use

KU5. safe handling of hazardous materials such as chemicals and flammable objects

KU6. the process of identifying health and safety hazards at the workplace and taking appropriate preventive measures

KU7. the importance of ensuring that only authorised personnel have access to hazardous work areas

KU8. the importance and process of arranging regular workplace audits to ensure safe working conditions

KU9. the correct action to be taken to deal with workplace emergencies such as fire, accidents, disease outbreak or natural calamities

KU10. the process of providing first aid and requesting further medical assistance

KU11. safe use of the emergency equipment as per the manufacturer's instructions

KU12. the process of reporting workplace emergencies/ accidents to the relevant authority in compliance with the organisational and regulatory requirements

Generic Skills (GS)

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

GS1. maintain work-related notes and 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 being shared by the speaker

GS7. identify possible disruptions to work and take appropriate preventive measures

GS8. co-ordinate with the co-workers to achieve the work objectives

GS9. evaluate all possible solutions to a problem to select the best one

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Ensure health and safety	**16**	**18**	**-**	**16**
PC1. follow the organisational policy to ensure personal health and safety at the work	-	-	-	-
PC2. ensure that all the co-workers use the appropriate PPE such as gloves, hairnet, mask, earplug, goggles and shoes in all the operations	-	-	-	-
PC3. conduct regular checks to ensure that PPE, emergency equipment and first-aid kit are updated and useable	-	-	-	-
PC4. arrange for the PPE, emergency equipment and first-aid kit to be updated/ replaced as required	-	-	-	-
PC5. ensure the machinery, tools, equipment and the work area are sanitised before and after the use	-	-	-	-
PC6. check that machineries, tools and equipment are used and stored safely as per the manufacturer's instructions	-	-	-	-
PC7. ensure safe handling of any hazardous materials such as chemicals and flammable objects	-	-	-	-
PC8. identify health and safety hazards at the work and take appropriate preventive measures	-	-	-	-
PC9. ensure that only authorised personnel have access to hazardous work areas	-	-	-	-
PC10. arrange for regular workplace audit to ensure safe working conditions	-	-	-	-
PC11. report any out of authority issues to the relevant authority for a timely resolution	-	-	-	-
Deal with emergencies at work	**14**	**22**	**-**	**14**

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC12. follow the organisational policy to deal with emergencies such as fire, accidents, disease outbreak or natural calamities	-	-	-	-
PC13. arrange for immediate medical attention for any injured personnel	-	-	-	-
PC14. ensure the safe use of emergency equipment according to the manufacturer's instructions	-	-	-	-
PC15. arrange for the emergency equipment to be repaired or replaced as required	-	-	-	-
PC16. report workplace emergencies/ accidents to the relevant authority in compliance with the organisational and regulatory requirements	-	-	-	-
NOS Total	**30**	**40**	**-**	**30**

National Occupational Standards (NOS) Parameters

NOS Code	AGR/N9911
NOS Name	Ensure adherence to health and safety guidelines at work
Sector	Agriculture
Sub-Sector	Agriculture Industries
Occupation	Commodity Management
NSQF Level	6
Credits	1
Version	2.0
Last Reviewed Date	30/12/2021
Next Review Date	29/03/2026
NSQC Clearance Date	29/03/2023

AGR/N9923: Manage and lead a team effectively

Description

This OS unit is about managing and leading a team to ensure that work objectives and organisational goals are achieved.

Scope

The scope covers the following :

- Manage the team performance
- Maintain a fair and professional work environment

Elements and Performance Criteria

Manage the team performance

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

PC1. prepare a work plan according to the tasks and the number of available team members

PC2. allocate tasks to the team members according to their skills and roles

PC3. arrange the necessary support and resources to help the team members perform their duties

PC4. conduct regular team meetings/ briefings to communicate with the team members regarding their work objectives, projects, work progress, etc.

PC5. monitor the performance of each team member and progress of the tasks assigned to them

PC6. collect the team performance data and prepare the necessary reports

PC7. evaluate the reports to identify the scope of improvement

PC8. assist the team members with poor performance in improving their performance

PC9. arrange for reward and recognition for the team members with good performance

PC10. arrange for relevant training and upskilling of the team members for their professional development

Maintain a fair and professional work environment

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

PC11. maintain professional relationships with the team members

PC12. conduct counselling sessions to resolve conflicts among the team members and guide them regarding their professional development

PC13. communicate with the team members to understand their concerns and find appropriate solutions

PC14. ensure equal and fair career progression opportunities for all the team members

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

KU1. the process of preparing a work plan and allocating tasks

KU2. the importance of conducting regular team meetings and counselling sessions

KU3. the importance and process of monitoring the team performance

KU4. how to prepare work progress reports and their evaluation

KU5. various practices to manage and improve team performance

KU6. the importance of ensuring reward and recognition for the team's good performance

KU7. the importance of arranging training and upskilling for team members for their professional development

KU8. how to maintain professional relationships with the team members

KU9. the importance and process of resolving conflicts among the team members

KU10. the importance of resolving concerns of the team members for their best performance

KU11. the importance of ensuring equal and fair career progression opportunities for all the team members

Generic Skills (GS)

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

GS1. write work-related notes and prepare reports

GS2. read the relevant policy and scheme-related documents

GS3. communicate politely and professionally

GS4. listen attentively to understand the information/ concerns being shared

GS5. plan and prioritise tasks to ensure timely completion

GS6. take quick decisions to deal with workplace emergencies/ accidents

GS7. identify possible disruptions to work and take preventive measures

GS8. co-ordinate with the co-workers to achieve the work objectives

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Manage the team performance	**16**	**24**	**-**	**15**
PC1. prepare a work plan according to the tasks and the number of available team members	-	-	-	-
PC2. allocate tasks to the team members according to their skills and roles	-	-	-	-
PC3. arrange the necessary support and resources to help the team members perform their duties	-	-	-	-
PC4. conduct regular team meetings/ briefings to communicate with the team members regarding their work objectives, projects, work progress, etc.	-	-	-	-
PC5. monitor the performance of each team member and progress of the tasks assigned to them	-	-	-	-
PC6. collect the team performance data and prepare the necessary reports	-	-	-	-
PC7. evaluate the reports to identify the scope of improvement	-	-	-	-
PC8. assist the team members with poor performance in improving their performance	-	-	-	-
PC9. arrange for reward and recognition for the team members with good performance	-	-	-	-
PC10. arrange for relevant training and upskilling of the team members for their professional development	-	-	-	-
Maintain a fair and professional work environment	**14**	**16**	**-**	**15**
PC11. maintain professional relationships with the team members	-	-	-	-
PC12. conduct counselling sessions to resolve conflicts among the team members and guide them regarding their professional development	-	-	-	-

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC13. communicate with the team members to understand their concerns and find appropriate solutions	-	-	-	-
PC14. ensure equal and fair career progression opportunities for all the team members	-	-	-	-
NOS Total	30	40	-	30

National Occupational Standards (NOS) Parameters

NOS Code	AGR/N9923
NOS Name	Manage and lead a team effectively
Sector	Agriculture
Sub-Sector	Generic
Occupation	Generic
NSQF Level	6
Credits	1
Version	2.0
Last Reviewed Date	NA
Next Review Date	25/11/2024
NSQC Clearance Date	25/11/2021

DGT/VSQ/N0103: Employability Skills (90 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. understand the significance of employability skills in meeting the current job market requirement and future of work

PC2. identify and explore learning and employability relevant portals

PC3. research about the different industries, job market trends, latest skills required and the available opportunities

Constitutional values – Citizenship

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

PC4. 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.

PC5. follow environmentally sustainable practices

Becoming a Professional in the 21st Century

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

PC6. recognize the significance of 21st Century Skills for employment

PC7. practice the 21st Century Skills such as Self-Awareness, Behaviour Skills, time management, critical and adaptive thinking, problem-solving, creative thinking, social and cultural awareness, emotional awareness, learning to learn for continuous learning etc. in personal and professional life

PC8. adopt a continuous learning mindset for personal and professional development

Basic English Skills

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

PC9. use basic English for everyday conversation in different contexts, in person and over the telephone

PC10. read and understand routine information, notes, instructions, mails, letters etc. written in English

PC11. write short messages, notes, letters, e-mails etc. in English

Career Development & Goal Setting

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

PC12. identify career goals based on the skills, interests, knowledge, and personal attributes

PC13. prepare a career development plan with short- and long-term goals

Communication Skills

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

PC14. follow verbal and non-verbal communication etiquette while communicating in professional and public settings

PC15. use active listening techniques for effective communication

PC16. communicate in writing using appropriate style and format based on formal or informal requirements

PC17. work collaboratively with others in a team

Diversity & Inclusion

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

PC18. communicate and behave appropriately with all genders and PwD

PC19. escalate any issues related to sexual harassment at workplace according to POSH Act

Financial and Legal Literacy

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

PC20. identify and select reliable institutions for various financial products and services such as bank account, debit and credit cards, loans, insurance etc.

PC21. carry out offline and online financial transactions, safely and securely, using various methods and check the entries in the passbook

PC22. identify common components of salary and compute income, expenses, taxes, investments etc

PC23. identify relevant rights and laws and use legal aids to fight against legal exploitation

Essential Digital Skills

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

PC24. operate digital devices and use their features and applications securely and safely

PC25. carry out basic internet operations by connecting to the internet safely and securely, using the mobile data or other available networks through Bluetooth, Wi-Fi, etc.

PC26. display responsible online behaviour while using various social media platforms

PC27. create a personal email account, send and process received messages as per requirement

PC28. carry out basic procedures in documents, spreadsheets and presentations using respective and appropriate applications

PC29. utilize virtual collaboration tools to work effectively

Entrepreneurship

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

PC30. identify different types of Entrepreneurship and Enterprises and assess opportunities for potential business through research

PC31. develop a business plan and a work model, considering the 4Ps of Marketing Product, Price, Place and Promotion

PC32. identify sources of funding, anticipate, and mitigate any financial/ legal hurdles for the potential business opportunity

Customer Service

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

PC33. identify different types of customers and ways to communicate with them

PC34. identify and respond to customer requests and needs in a professional manner

PC35. use appropriate tools to collect customer feedback

PC36. follow appropriate hygiene and grooming standards

Getting ready for apprenticeship & Jobs

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

PC37. create a professional Curriculum vitae (Résumé)

PC38. search for suitable jobs using reliable offline and online sources such as Employment exchange, recruitment agencies, newspapers etc. and job portals, respectively

PC39. apply to identified job openings using offline /online methods as per requirement

PC40. answer questions politely, with clarity and confidence, during recruitment and selection

PC41. identify apprenticeship opportunities and register for it as per guidelines and requirements

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. components of salary and 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

KU16. use applications such as word processors, spreadsheets etc.

KU17. how to identify business opportunities

KU18. types and needs of customers

KU19. how to apply for a job and prepare for an interview

KU20. 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 in English and other languages

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

GS3. behave politely and appropriately with all to maintain effective work relationship

GS4. how to work in a virtual mode, using various technological platforms

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

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Introduction to Employability Skills	**1**	**1**	**-**	**-**
PC1. understand the significance of employability skills in meeting the current job market requirement and future of work	-	-	-	-
PC2. identify and explore learning and employability relevant portals	-	-	-	-
PC3. research about the different industries, job market trends, latest skills required and the available opportunities	-	-	-	-
Constitutional values – Citizenship	**1**	**1**	**-**	**-**
PC4. recognize the significance of constitutional values, including civic rights and duties, citizenship, responsibility towards society etc. and personal values and ethics such as honesty, integrity, caring and respecting others, etc.	-	-	-	-
PC5. follow environmentally sustainable practices	-	-	-	-
Becoming a Professional in the 21st Century	**1**	**3**	**-**	**-**
PC6. recognize the significance of 21st Century Skills for employment	-	-	-	-
PC7. practice the 21st Century Skills such as Self-Awareness, Behaviour Skills, time management, critical and adaptive thinking, problem-solving, creative thinking, social and cultural awareness, emotional awareness, learning to learn for continuous learning etc. in personal and professional life	-	-	-	-
PC8. adopt a continuous learning mindset for personal and professional development	-	-	-	-
Basic English Skills	**3**	**4**	**-**	**-**
PC9. use basic English for everyday conversation in different contexts, in person and over the telephone	-	-	-	-

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC10. read and understand routine information, notes, instructions, mails, letters etc. written in English	-	-	-	-
PC11. write short messages, notes, letters, e-mails etc. in English	-	-	-	-
Career Development & Goal Setting	**1**	**2**	**-**	**-**
PC12. identify career goals based on the skills, interests, knowledge, and personal attributes	-	-	-	-
PC13. prepare a career development plan with short- and long-term goals	-	-	-	-
Communication Skills	**2**	**2**	**-**	**-**
PC14. follow verbal and non-verbal communication etiquette while communicating in professional and public settings	-	-	-	-
PC15. use active listening techniques for effective communication	-	-	-	-
PC16. communicate in writing using appropriate style and format based on formal or informal requirements	-	-	-	-
PC17. work collaboratively with others in a team	-	-	-	-
Diversity & Inclusion	**1**	**1**	**-**	**-**
PC18. communicate and behave appropriately with all genders and PwD	-	-	-	-
PC19. escalate any issues related to sexual harassment at workplace according to POSH Act	-	-	-	-
Financial and Legal Literacy	**2**	**3**	**-**	**-**
PC20. identify and select reliable institutions for various financial products and services such as bank account, debit and credit cards, loans, insurance etc.	-	-	-	-
PC21. carry out offline and online financial transactions, safely and securely, using various methods and check the entries in the passbook	-	-	-	-

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC22. identify common components of salary and compute income, expenses, taxes, investments etc	-	-	-	-
PC23. identify relevant rights and laws and use legal aids to fight against legal exploitation	-	-	-	-
Essential Digital Skills	**3**	**5**	**-**	**-**
PC24. operate digital devices and use their features and applications securely and safely	-	-	-	-
PC25. carry out basic internet operations by connecting to the internet safely and securely, using the mobile data or other available networks through Bluetooth, Wi-Fi, etc.	-	-	-	-
PC26. display responsible online behaviour while using various social media platforms	-	-	-	-
PC27. create a personal email account, send and process received messages as per requirement	-	-	-	-
PC28. carry out basic procedures in documents, spreadsheets and presentations using respective and appropriate applications	-	-	-	-
PC29. utilize virtual collaboration tools to work effectively	-	-	-	-
Entrepreneurship	**2**	**3**	**-**	**-**
PC30. identify different types of Entrepreneurship and Enterprises and assess opportunities for potential business through research	-	-	-	-
PC31. develop a business plan and a work model, considering the 4Ps of Marketing Product, Price, Place and Promotion	-	-	-	-
PC32. identify sources of funding, anticipate, and mitigate any financial/ legal hurdles for the potential business opportunity	-	-	-	-
Customer Service	**1**	**2**	**-**	**-**
PC33. identify different types of customers and ways to communicate with them	-	-	-	-

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC34. identify and respond to customer requests and needs in a professional manner	-	-	-	-
PC35. use appropriate tools to collect customer feedback	-	-	-	-
PC36. follow appropriate hygiene and grooming standards	-	-	-	-
Getting ready for apprenticeship & Jobs	**2**	**3**	**-**	**-**
PC37. create a professional Curriculum vitae (Résumé)	-	-	-	-
PC38. search for suitable jobs using reliable offline and online sources such as Employment exchange, recruitment agencies, newspapers etc. and job portals, respectively	-	-	-	-
PC39. apply to identified job openings using offline /online methods as per requirement	-	-	-	-
PC40. answer questions politely, with clarity and confidence, during recruitment and selection	-	-	-	-
PC41. identify apprenticeship opportunities and register for it as per guidelines and requirements	-	-	-	-
NOS Total	**20**	**30**	**-**	**-**

National Occupational Standards (NOS) Parameters

NOS Code	DGT/VSQ/N0103
NOS Name	Employability Skills (90 Hours)
Sector	Cross Sectoral
Sub-Sector	Professional Skills
Occupation	Employability
NSQF Level	5
Credits	3
Version	1.0
Last Reviewed Date	NA
Next Review Date	29/03/2026
NSQC Clearance Date	29/03/2023

Assessment Guidelines and Assessment Weightage

Assessment Guidelines

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 the proportion of marks for Theory and Skills Practical for each PC.

The assessment for the theory part will be based on the knowledge bank of questions created by the SSC.

Individual assessment agencies will create unique question papers for theory part for each candidate at each examination/training center (as per assessment criteria below).

Individual assessment agencies will create unique evaluations for skill practical for every student at each examination/ training center based on these criteria.

In case of successfully passing only a certain number of NOSs, the trainee is eligible to take a subsequent assessment on the balance NOS's to pass the Qualification Pack.

In case of unsuccessful completion, the trainee may seek reassessment on the 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/N7110.Supervise the preparation of the lab, lab equipment and reagents	30	40	-	30	100	30
AGR/N7112.Supervise the sampling and testing of seeds	30	40	-	30	100	30
AGR/N7113.Supervise the maintenance of seed analysis records	30	40	-	30	100	25
AGR/N9911.Ensure adherence to health and safety guidelines at work	30	40	-	30	100	5
AGR/N9923.Manage and lead a team effectively	30	40	-	30	100	5
DGT/VSQ/N0103.Employability Skills (90 Hours)	20	30	-	-	50	5
Total	**170**	**230**	**-**	**150**	**550**	**100**

Acronyms

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

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.

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.