

Qualification Pack



Seed Processing Plant -Technician

QP Code: AGR/Q7104

Version: 3.0

NSQF Level: 4

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AGR/Q7104: Seed Processing Plant -Technician

Brief Job Description

A Seed Processing Plant Technician is responsible for operating various machineries to improve the quality of seeds. The individual is also responsible for preparing the work area, packing and storing the processed seeds, and maintaining various records relevant to seed processing.

Personal Attributes

The individual in this job role must have good eyesight, attention to detail and ability to work for long hours with concentration. The person must be able to read, write and co-ordinate with others to achieve the work objectives.

Applicable National Occupational Standards (NOS)

Compulsory NOS:

1. [AGR/N7115: Prepare the work area and machineries for seed processing](#)
2. [AGR/N7117: Operate the seed processing machineries to process the seeds](#)
3. [AGR/N7122: Pack, weigh and store the seeds](#)
4. [AGR/N7118: Record and maintain the seed processing data](#)
5. [AGR/N9903: Maintain health and safety at the workplace](#)
6. [DGT/VSQ/N0102: Employability Skills \(60 Hours\)](#)

Qualification Pack (QP) Parameters

Sector	Agriculture
Sub-Sector	Agriculture Industries
Occupation	Seed Production and Processing
Country	India
NSQF Level	4
Credits	13

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Aligned to NCO/ISCO/ISIC Code	NCO-2015/NIL
Minimum Educational Qualification & Experience	12th grade Pass OR Completed 2nd year of the 3-year diploma after 10 (and pursuing regular diploma) OR 10th grade pass (plus 2-year NTC) OR 10th grade pass (plus 1-year NTC plus 1 year NAC) OR 8th grade pass with 2 year NTC plus 1 year NAC plus 1 year CITS OR 10th grade pass and pursuing continuous schooling OR 10th grade pass with 2 Years of experience relevant experience OR Previous relevant Qualification of NSQF Level (Level 3.0 with minimum education as 8th Grade pass) with 3 Years of experience relevant experience OR Previous relevant Qualification of NSQF Level (Level 3.5 with 1.5- year relevant experience)
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-04-AG-00309-2023-V1.1-ASCI
NQR Version	1.1

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AGR/N7115: Prepare the work area and machineries for seed processing

Description

This OS unit is about preparing the work area and machineries for carrying out seed processing.

Scope

The scope covers the following :

- Prepare the work area for seed processing
- Prepare the seed processing machineries

Elements and Performance Criteria

Prepare the work area for seed processing

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

- PC1.** clean the seed processing area to remove dust and any other waste materials
- PC2.** use the recommended treatment to sanitise the area and remove pests and rodents
- PC3.** ensure the area has good air-circulation and lighting
- PC4.** ensure the availability of electricity for operating the seed processing machineries
- PC5.** plug any water leakages and ensure the floor is dry
- PC6.** carry out minor infrastructural repair and maintenance in the wok area
- PC7.** arrange the necessary tools, equipment and Personal Protective Equipment (PPE)

Prepare the seed processing machineries

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

- PC8.** select the appropriate machineries such as cleaner, scalper, air screen cleaner, specific gravity separator, treater according to the seed processing required
- PC9.** examine the machineries for any wear and tear or damage
- PC10.** carry out minor repair and maintenance of the machineries
- PC11.** co-ordinate with the manufacturer for any complex repair and maintenance needs
- PC12.** maintain the record of the repair and maintenance of the machineries
- PC13.** ensure there are appropriate conditions for operating the machineries as recommended by the manufacturer

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** applicable documentation requirements
- KU2.** the process of cleaning the seed processing area
- KU3.** use of the approved disinfectants and sanitisers
- KU4.** various seed processing machineries such as scalper, air screen cleaner, gravity separator, etc.

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- KU5.** basic repair and maintenance of the plant infrastructure and seed processing machineries
- KU6.** appropriate conditions for working at the plant and operating the seed processing machineries
- KU7.** use of the relevant PPE, repair and maintenance tools and equipment

Generic Skills (GS)

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

- GS1.** write work-related notes
- GS2.** read the relevant guides and manuals
- GS3.** listen carefully to understand the information/ instructions being given by the speaker
- GS4.** communicate politely and professionally
- GS5.** plan and schedule tasks for effective time management
- GS6.** co-ordinate with the co-workers to achieve the work objectives
- GS7.** take quick decisions to deal with workplace emergencies/ accidents
- GS8.** identify possible disruptions to work and take relevant preventive measures

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Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Prepare the work area for seed processing</i>	12	24	-	18
PC1. clean the seed processing area to remove dust and any other waste materials	-	-	-	-
PC2. use the recommended treatment to sanitise the area and remove pests and rodents	-	-	-	-
PC3. ensure the area has good air-circulation and lighting	-	-	-	-
PC4. ensure the availability of electricity for operating the seed processing machineries	-	-	-	-
PC5. plug any water leakages and ensure the floor is dry	-	-	-	-
PC6. carry out minor infrastructural repair and maintenance in the wok area	-	-	-	-
PC7. arrange the necessary tools, equipment and Personal Protective Equipment (PPE)	-	-	-	-
<i>Prepare the seed processing machineries</i>	18	16	-	12
PC8. select the appropriate machineries such as cleaner, scalper, air screen cleaner, specific gravity separator, treater according to the seed processing required	-	-	-	-
PC9. examine the machineries for any wear and tear or damage	-	-	-	-
PC10. carry out minor repair and maintenance of the machineries	-	-	-	-
PC11. co-ordinate with the manufacturer for any complex repair and maintenance needs	-	-	-	-
PC12. maintain the record of the repair and maintenance of the machineries	-	-	-	-
PC13. ensure there are appropriate conditions for operating the machineries as recommended by the manufacturer	-	-	-	-

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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
NOS Total	30	40	-	30

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National Occupational Standards (NOS) Parameters

NOS Code	AGR/N7115
NOS Name	Prepare the work area and machineries for seed processing
Sector	Agriculture
Sub-Sector	Agriculture Industries
Occupation	Seed Production and Processing
NSQF Level	4
Credits	2
Version	2.0
Last Reviewed Date	30/12/2021
Next Review Date	30/12/2024
NSQC Clearance Date	30/12/2021

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AGR/N7117: Operate the seed processing machineries to process the seeds

Description

This OS is about operating various seed processing machineries to process seeds and making them ready for use.

Scope

The scope covers the following :

- Prepare for seed processing
- Pre-clean the seeds
- Clean the seeds
- Fine clean the seeds
- Grade the seeds
- Optimise resource utilisation

Elements and Performance Criteria

Prepare for seed processing

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

- PC1.** weigh the seeds received at the seed processing plant
- PC2.** assess the level of impurities in the seeds
- PC3.** segregate the seeds in different lots according to the shape, structure, colour and moisture content
- PC4.** apply labels on the seed lots for the purpose of identification
- PC5.** ensure that the seed lots don't have admixture from other seed lots
- PC6.** store the seeds maintaining the required temperature and relative humidity

Pre-clean the seeds

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

- PC7.** carry out winnowing using winnowing trays or by dropping the seeds through a stream of wind onto a clean area to separate heavy and light materials
- PC8.** set up the scalper screen or drum at the recommended inclination as per the manufacturer's instructions
- PC9.** feed raw seeds onto the scalper at the recommended rate to remove large debris, straw, leaves and chaff
- PC10.** operate the de-awner to remove awns, beards, tips or glumes on seeds
- PC11.** regulate the rotation speed of the de-awner shaft and adjust the distance between the beaters and the discharge shutter in the de-awner to minimise damage to the seeds

Clean the seeds

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

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- PC12.** select an air-screen cleaner with flat screens/ a rotary air-screen cleaner with cylindrical screens according to the quantity and type of seeds
- PC13.** install the air-screen cleaner with the screen containing perforations of appropriate specifications according to the variety of seeds to be cleaned
- PC14.** carry out aspiration using an aspirator to remove light particles from the seeds
- PC15.** use combination of screens with varying specification of perforations according to the type of seeds
- PC16.** monitor the screens for even distribution during the screening process
- PC17.** replace the worn-out or damaged screens

Fine clean the seeds

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

- PC18.** select indented cylinders of the appropriate capacity according to the quantity of seeds
- PC19.** feed seeds through the inlet of the indented cylinder
- PC20.** operate the indented cylinder to separate the small and broken seeds from the larger seeds
- PC21.** adjust the feed rate to achieve good quality of seeds and optimum performance of the indented cylinder
- PC22.** carry out fine cleaning to remove coarse impurities, sand, stones, under and over-sized seeds
- PC23.** collect the larger seeds from the outlet of the indented cylinder

Grade the seeds

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

- PC24.** select a gravity separator with a triangular deck for separating light seeds or a rectangular deck for separating heavy seeds
- PC25.** install the gravity separator as per the manufacturer's instructions
- PC26.** adjust the angle of inclination of the deck, deck oscillation speed, supply of pressurised air according to the type of seed
- PC27.** feed seeds onto the deck in a steady stream for a uniform spread over the deck surface
- PC28.** adjust the side tilt, end raise and eccentric speed to achieve machine efficiency
- PC29.** collect the separated seeds discharged through the collecting spouts fixed at the end of the deck

Optimise resource utilisation

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

- PC30.** optimise usage of water/electricity/ materials in various tasks/ activities/ processes
- PC31.** connect electrical tools and equipment safely and turn off when not in use

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** how to assess the level of impurities in the seeds received at the seed processing plant
- KU2.** the process of segregating seeds according to the shape, structure, colour and moisture content
- KU3.** required temperature and relative humidity for storing seeds before processing

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- KU4.** the process of pre-cleaning the seeds and the activities involved, such as winnowing, scalping and de-awning
- KU5.** the process of installing scalper and de-awner, and their correct use to achieve maximum machine efficiency
- KU6.** the selection criteria and installation of air-screen cleaner with flat screens or a rotary air-screen cleaner with cylindrical screens
- KU7.** correct use of an aspirator
- KU8.** the process of using air screens in combination according to the type of seeds
- KU9.** the selection criteria and installation of single indented cylinder or multiple cylinders in a series
- KU10.** how to adjust the indented cylinder's feed rate to achieve good quality of seeds and optimum performance of the indented cylinder
- KU11.** the criteria for selecting a gravity separator with a triangular deck or a rectangular deck and the installation process
- KU12.** how to adjust the gravity separator deck's angle of inclination, deck oscillation speed, supply of pressurised air, side tilt, end raise and eccentric speed
- KU13.** the importance of following environmental and ecological best practices
- KU14.** benefits of resource optimisation
- KU15.** ways of efficiently managing various materials used in different operations
- KU16.** common practices of conserving electricity

Generic Skills (GS)

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

- GS1.** write short and precise notes
- GS2.** read the relevant guides and manuals
- GS3.** co-ordinate with the co-workers to achieve the work objectives
- GS4.** plan and prioritise tasks to ensure timely completion
- GS5.** communicate politely and professionally
- GS6.** listen attentively to comprehend the information/ instructions being shared
- GS7.** take quick decisions to deal with any emergencies/accidents
- GS8.** identify possible disruptions to work and take appropriate preventive measures
- 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>Prepare for seed processing</i>	6	8	-	4
PC1. weigh the seeds received at the seed processing plant	-	-	-	-
PC2. assess the level of impurities in the seeds	-	-	-	-
PC3. segregate the seeds in different lots according to the shape, structure, colour and moisture content	-	-	-	-
PC4. apply labels on the seed lots for the purpose of identification	-	-	-	-
PC5. ensure that the seed lots don't have admixture from other seed lots	-	-	-	-
PC6. store the seeds maintaining the required temperature and relative humidity	-	-	-	-
<i>Pre-clean the seeds</i>	6	6	-	8
PC7. carry out winnowing using winnowing trays or by dropping the seeds through a stream of wind onto a clean area to separate heavy and light materials	-	-	-	-
PC8. set up the scalper screen or drum at the recommended inclination as per the manufacturer's instructions	-	-	-	-
PC9. feed raw seeds onto the scalper at the recommended rate to remove large debris, straw, leaves and chaff	-	-	-	-
PC10. operate the de-awner to remove awns, beards, tips or glumes on seeds	-	-	-	-
PC11. regulate the rotation speed of the de-awner shaft and adjust the distance between the beaters and the discharge shutter in the de-awner to minimise damage to the seeds	-	-	-	-
<i>Clean the seeds</i>	6	8	-	6

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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC12. select an air-screen cleaner with flat screens/ a rotary air-screen cleaner with cylindrical screens according to the quantity and type of seeds	-	-	-	-
PC13. install the air-screen cleaner with the screen containing perforations of appropriate specifications according to the variety of seeds to be cleaned	-	-	-	-
PC14. carry out aspiration using an aspirator to remove light particles from the seeds	-	-	-	-
PC15. use combination of screens with varying specification of perforations according to the type of seeds	-	-	-	-
PC16. monitor the screens for even distribution during the screening process	-	-	-	-
PC17. replace the worn-out or damaged screens	-	-	-	-
<i>Fine clean the seeds</i>	4	6	-	4
PC18. select indented cylinders of the appropriate capacity according to the quantity of seeds	-	-	-	-
PC19. feed seeds through the inlet of the indented cylinder	-	-	-	-
PC20. operate the indented cylinder to separate the small and broken seeds from the larger seeds	-	-	-	-
PC21. adjust the feed rate to achieve good quality of seeds and optimum performance of the indented cylinder	-	-	-	-
PC22. carry out fine cleaning to remove coarse impurities, sand, stones, under and over-sized seeds	-	-	-	-
PC23. collect the larger seeds from the outlet of the indented cylinder	-	-	-	-
<i>Grade the seeds</i>	6	8	-	6

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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC24. select a gravity separator with a triangular deck for separating light seeds or a rectangular deck for separating heavy seeds	-	-	-	-
PC25. install the gravity separator as per the manufacturer's instructions	-	-	-	-
PC26. adjust the angle of inclination of the deck, deck oscillation speed, supply of pressurised air according to the type of seed	-	-	-	-
PC27. feed seeds onto the deck in a steady stream for a uniform spread over the deck surface	-	-	-	-
PC28. adjust the side tilt, end raise and eccentric speed to achieve machine efficiency	-	-	-	-
PC29. collect the separated seeds discharged through the collecting spouts fixed at the end of the deck	-	-	-	-
<i>Optimise resource utilisation</i>	2	4	-	2
PC30. optimise usage of water/electricity/ materials in various tasks/ activities/ processes	-	-	-	-
PC31. connect electrical tools and equipment safely and turn off when not in use	-	-	-	-
NOS Total	30	40	-	30

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National Occupational Standards (NOS) Parameters

NOS Code	AGR/N7117
NOS Name	Operate the seed processing machineries to process the seeds
Sector	Agriculture
Sub-Sector	Agriculture Industries
Occupation	Seed Production and Processing
NSQF Level	4
Credits	3
Version	2.0
Last Reviewed Date	30/12/2021
Next Review Date	30/12/2024
NSQC Clearance Date	30/12/2021

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AGR/N7122: Pack, weigh and store the seeds

Description

This OS is about carrying after-processing activities for seeds such as weighing, packing, labelling and storing them.

Scope

The scope covers the following :

- Pack and weigh the seeds
- Prepare the storage area
- Store the seed bags
- Perform waste management

Elements and Performance Criteria

Pack and weigh the seeds

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

- PC1.** arrange seed bags of appropriate capacity according to the type of seeds
- PC2.** check that the seed bags conform to the applicable regulatory packaging requirements
- PC3.** examine the seed bags for any damage and replace if required
- PC4.** fill in the seed bags with the processed seeds ensuring no damage to the seeds
- PC5.** weigh the seed bags to ensure correct weight as printed on the bags
- PC6.** apply seal and relevant labels on the seed bags ensuring accuracy of the label information

Prepare the storage area

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

- PC7.** check the storage at the plant has the required temperature, air circulation and humidity levels for the storage of seeds
- PC8.** apply the necessary treatment in the storage area to remove any pest/ insects/ rodents
- PC9.** ensure the storage area is free of any water leakage
- PC10.** clean the storage area to remove all dust, waste and hazardous materials
- PC11.** ensure the availability of appropriate material for the safe storage of seeds such as wooden platforms, racks, crates, etc.

Store the seed bags

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

- PC12.** stack the seed bags in the correct way, ensuring that weight pressure does not cause damage to the seeds
- PC13.** maintain appropriate spacing between the seed bags
- PC14.** store bags of different seed types separately
- PC15.** handle seed bags ensuring no damage to the packing material

Perform waste management

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

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- PC16.** segregate waste into different categories
- PC17.** dispose non-recyclable waste appropriately
- PC18.** deposit recyclable and reusable material at the identified location

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** appropriate packing material of appropriate capacities for different types of seed
- KU2.** applicable regulatory requirements with respect to the packing material, weight and labelling
- KU3.** correct process of filling in seed bags ensuring no damage to the seeds
- KU4.** appropriate conditions for storing seeds such as the temperature, air circulation and humidity
- KU5.** relevant treatments to make the seed storage area free of pests, insects and rodents
- KU6.** appropriate material for the safe storage of seeds such as wooden platforms, racks, crates, etc.
- KU7.** the correct way of handling seed bags and stacking/ storing them
- KU8.** different ways of recycling and disposing different types of waste
- KU9.** 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 reports and notes
- GS2.** read the relevant literature to get latest updates about the field of work
- GS3.** communicate politely and professionally
- GS4.** listen attentively to understand the information/ instruction being given
- GS5.** plan and schedule tasks for efficient use of time
- GS6.** take quick decisions to deal with any incidents/ accidents
- GS7.** identify possible disruptions to work and take appropriate preventive measures
- GS8.** co-ordinate with the co-workers to achieve the work objectives

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Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Pack and weigh the seeds</i>	8	10	-	8
PC1. arrange seed bags of appropriate capacity according to the type of seeds	-	-	-	-
PC2. check that the seed bags conform to the applicable regulatory packaging requirements	-	-	-	-
PC3. examine the seed bags for any damage and replace if required	-	-	-	-
PC4. fill in the seed bags with the processed seeds ensuring no damage to the seeds	-	-	-	-
PC5. weigh the seed bags to ensure correct weight as printed on the bags	-	-	-	-
PC6. apply seal and relevant labels on the seed bags ensuring accuracy of the label information	-	-	-	-
<i>Prepare the storage area</i>	8	12	-	8
PC7. check the storage at the plant has the required temperature, air circulation and humidity levels for the storage of seeds	-	-	-	-
PC8. apply the necessary treatment in the storage area to remove any pest/ insects/ rodents	-	-	-	-
PC9. ensure the storage area is free of any water leakage	-	-	-	-
PC10. clean the storage area to remove all dust, waste and hazardous materials	-	-	-	-
PC11. ensure the availability of appropriate material for the safe storage of seeds such as wooden platforms, racks, crates, etc.	-	-	-	-
<i>Store the seed bags</i>	6	8	-	6
PC12. stack the seed bags in the correct way, ensuring that weight pressure does not cause damage to the seeds	-	-	-	-

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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC13. maintain appropriate spacing between the seed bags	-	-	-	-
PC14. store bags of different seed types separately	-	-	-	-
PC15. handle seed bags ensuring no damage to the packing material	-	-	-	-
<i>Perform waste management</i>	8	10	-	8
PC16. segregate waste into different categories	-	-	-	-
PC17. dispose non-recyclable waste appropriately	-	-	-	-
PC18. deposit recyclable and reusable material at the identified location	-	-	-	-
NOS Total	30	40	-	30

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National Occupational Standards (NOS) Parameters

NOS Code	AGR/N7122
NOS Name	Pack, weigh and store the seeds
Sector	Agriculture
Sub-Sector	Agriculture Industries
Occupation	Seed Production and Processing
NSQF Level	4
Credits	3
Version	1.0
Last Reviewed Date	30/12/2021
Next Review Date	30/12/2024
NSQC Clearance Date	30/12/2021

Qualification Pack

AGR/N7118: Record and maintain the seed processing data

Description

This OS is about recording and maintaining the record of various seed-processing activities.

Scope

The scope covers the following :

- Maintain the record of operations
- Review and audit the records

Elements and Performance Criteria

Maintain the record of operations

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

- PC1.** record the seed supplier details, date of receipt of seed lots, weight, quality along with other relevant details in the physical registers and/ or the organisation's Enterprise Resource Planning (ERP) system
- PC2.** record the data of seeds found unfit for processing and returned to the supplier
- PC3.** document details regarding the use of various machineries used during seed processing such as output and breakdown
- PC4.** record details with respect to the different types of seeds processed, batch size, wastage of seeds, etc.
- PC5.** maintain record of the relevant observations and deviations
- PC6.** maintain the record of seeds packed, labelled and stored
- PC7.** create backup of the data to protect against accidental loss

Review and audit the records

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

- PC8.** review the records to ensure accuracy of the information
- PC9.** co-ordinate with the relevant personnel for the audit of the records to ensure compliance with the regulatory requirements

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** relevant information to be recorded with respect to the seeds received at the seed processing plant such as the supplier details, date of receipt, weight, quality including information about the seeds found unfit for processing and returned to the supplier
- KU2.** relevant information to be recorded regarding the use of various machineries during seed processing such as the output and breakdown
- KU3.** details to be recorded regarding different types of seeds processed, batch size, wastage of seeds, and seeds packed, labelled and stored

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- KU4.** how to record and store various types of data in the physical registers and the Enterprise Resource Planning (ERP) system used by the organisation
- KU5.** the importance and process of creating data backup to protect against accidental loss
- KU6.** the process of reviewing the records to ensure accuracy of the records and getting them audited to ensure compliance with the regulatory requirements

Generic Skills (GS)

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

- GS1.** maintain work-related records
- GS2.** read the relevant literature to get latest updates about the field of work
- GS3.** communicate politely and professionally
- GS4.** listen attentively to understand the information/ instructions being given
- GS5.** plan and schedule tasks for efficient use of time
- GS6.** take quick decisions to deal with workplace emergencies/ accidents
- GS7.** identify possible disruptions to work and take appropriate preventive measures
- GS8.** co-ordinate with the co-workers to achieve the work objectives

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Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Maintain the record of operations</i>	20	25	-	20
PC1. record the seed supplier details, date of receipt of seed lots, weight, quality along with other relevant details in the physical registers and/ or the organisation's Enterprise Resource Planning (ERP) system	-	-	-	-
PC2. record the data of seeds found unfit for processing and returned to the supplier	-	-	-	-
PC3. document details regarding the use of various machineries used during seed processing such as output and breakdown	-	-	-	-
PC4. record details with respect to the different types of seeds processed, batch size, wastage of seeds, etc.	-	-	-	-
PC5. maintain record of the relevant observations and deviations	-	-	-	-
PC6. maintain the record of seeds packed, labelled and stored	-	-	-	-
PC7. create backup of the data to protect against accidental loss	-	-	-	-
<i>Review and audit the records</i>	10	15	-	10
PC8. review the records to ensure accuracy of the information	-	-	-	-
PC9. co-ordinate with the relevant personnel for the audit of the records to ensure compliance with the regulatory requirements	-	-	-	-
NOS Total	30	40	-	30

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National Occupational Standards (NOS) Parameters

NOS Code	AGR/N7118
NOS Name	Record and maintain the seed processing data
Sector	Agriculture
Sub-Sector	Agriculture Industries
Occupation	Seed Production and Processing
NSQF Level	4
Credits	1
Version	2.0
Last Reviewed Date	30/12/2021
Next Review Date	30/12/2024
NSQC Clearance Date	30/12/2021

Qualification Pack

AGR/N9903: Maintain health and safety at the workplace

Description

This OS is about maintaining health and safety of self and other co-workers at the workplace

Scope

The scope covers the following :

- Maintain personal hygiene
- Maintain clean and safe workplace
- Administer appropriate emergency procedures

Elements and Performance Criteria

Maintain personal hygiene

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

- PC1.** wash hands, legs and face with soap/alcohol based sanitizer at reasonable intervals
- PC2.** wash the worn clothes with soap and sun dry before use next time
- PC3.** ensure the face is covered with mask or three layers of cloth-piece
- PC4.** follow the workplace sanitization norms including distancing from sick people

Maintain clean and safe workplace

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

- PC5.** carry out basic safety checks before operation of all tools, implements, and machinery and report identified hazards to the supervisor
- PC6.** wear appropriate Personal Protective Equipment (PPE) while performing work in accordance with the workplace policy
- PC7.** follow the instructions mentioned on the labels of chemicals/pesticides/fumigants etc to avoid hazards
- PC8.** assess risks prior to performing manual handling jobs, and work according to currently recommended safe practices
- PC9.** sanitize equipment, tools and machinery before and after use
- PC10.** use equipment and materials safely and correctly and return the same to designated storage after use
- PC11.** dispose waste safely and correctly in the designated area
- PC12.** recognize risks to bystanders and take required action to reduce the risks
- PC13.** work in a manner which minimizes environmental damage, ensuring all procedures and instructions for controlling risks are followed
- PC14.** report any accidents, incidents or problems without delay to an appropriate person and take necessary immediate action to reduce further danger
- PC15.** follow government / workplace advisories incase of outbreak of any disease/disaster

Administer appropriate emergency procedures

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

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- PC16.** follow procedures for dealing with accidents, fires and emergencies, including communicating location and directions to the location of emergency, as per the workplace requirements
- PC17.** use emergency equipment in accordance with manufacturer's specifications and workplace requirements
- PC18.** provide treatment appropriate to the patient's injuries in accordance with recognized first aid techniques
- PC19.** recover (if practical), clean, inspect/test, refurbish, replace and store the first aid equipment as appropriate
- PC20.** report details of first aid administered in accordance with workplace procedures

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** relevant legislation, standards, policies, and procedures at work
- KU2.** relevant health and safety requirements applicable to the work environment
- KU3.** own job role and responsibilities and sources of information pertaining to work
- KU4.** who to approach for support in order to obtain work related information, clarifications and support
- KU5.** importance of following health, hygiene, safety and quality standards and the impact of not following the standards on consumers and the business
- KU6.** personal hygiene and fitness requirement
- KU7.** importance of sanitization of the workplace
- KU8.** types of Personal Protective Equipment (PPE) required at the workplace and their importance
- KU9.** the correct and safe way to use materials and equipment required for the work
- KU10.** the importance of good housekeeping at the workplace
- KU11.** safe waste disposal methods
- KU12.** methods for minimizing environmental damage during work
- KU13.** the risks to health and safety including contagious diseases and the measures to be taken to control those risks in the area of work
- KU14.** workplace procedures and requirements for the prevention and treatment of workplace injuries/illnesses.
- KU15.** basic emergency first aid procedure
- KU16.** local emergency services
- KU17.** why accidents, incidents and problems should be reported and the appropriate actions to be taken

Generic Skills (GS)

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

- GS1.** record the data as per the requirement
- GS2.** report problems to the appropriate personnel in a timely manner

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- GS3.** read instruction manual for hand tool and equipments
- GS4.** communicate clearly and effectively with co-workers, and other stakeholders
- GS5.** comprehend information shared by senior people and experts
- GS6.** make decisions pertaining to personal hygiene and safety
- GS7.** schedule daily activities and draw up priorities
- GS8.** manage relationships with co-workers, manager and other stakeholders
- GS9.** assess situation and identify appropriate control measures

Qualification Pack

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Maintain personal hygiene</i>	10	5	-	10
PC1. wash hands, legs and face with soap/alcohol based sanitizer at reasonable intervals	-	-	-	-
PC2. wash the worn clothes with soap and sun dry before use next time	-	-	-	-
PC3. ensure the face is covered with mask or three layers of cloth-piece	-	-	-	-
PC4. follow the workplace sanitization norms including distancing from sick people	-	-	-	-
<i>Maintain clean and safe workplace</i>	15	15	-	15
PC5. carry out basic safety checks before operation of all tools, implements, and machinery and report identified hazards to the supervisor	-	-	-	-
PC6. wear appropriate Personal Protective Equipment (PPE) while performing work in accordance with the workplace policy	-	-	-	-
PC7. follow the instructions mentioned on the labels of chemicals/pesticides/fumigants etc to avoid hazards	-	-	-	-
PC8. assess risks prior to performing manual handling jobs, and work according to currently recommended safe practices	-	-	-	-
PC9. sanitize equipment, tools and machinery before and after use	-	-	-	-
PC10. use equipment and materials safely and correctly and return the same to designated storage after use	-	-	-	-
PC11. dispose waste safely and correctly in the designated area	-	-	-	-
PC12. recognize risks to bystanders and take required action to reduce the risks	-	-	-	-

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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC13. work in a manner which minimizes environmental damage, ensuring all procedures and instructions for controlling risks are followed	-	-	-	-
PC14. report any accidents, incidents or problems without delay to an appropriate person and take necessary immediate action to reduce further danger	-	-	-	-
PC15. follow government / workplace advisories incase of outbreak of any disease/disaster	-	-	-	-
<i>Administer appropriate emergency procedures</i>	15	5	-	10
PC16. follow procedures for dealing with accidents, fires and emergencies, including communicating location and directions to the location of emergency, as per the workplace requirements	-	-	-	-
PC17. use emergency equipment in accordance with manufacturer's specifications and workplace requirements	-	-	-	-
PC18. provide treatment appropriate to the patient's injuries in accordance with recognized first aid techniques	-	-	-	-
PC19. recover (if practical), clean, inspect/test, refurbish, replace and store the first aid equipment as appropriate	-	-	-	-
PC20. report details of first aid administered in accordance with workplace procedures	-	-	-	-
NOS Total	40	25	-	35

Qualification Pack

National Occupational Standards (NOS) Parameters

NOS Code	AGR/N9903
NOS Name	Maintain health and safety at the workplace
Sector	Agriculture
Sub-Sector	Generic
Occupation	Generic
NSQF Level	4
Credits	1
Version	3.0
Last Reviewed Date	26/05/2022
Next Review Date	27/05/2024
NSQC Clearance Date	27/05/2021

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.

Qualification Pack

PC28. follow appropriate hygiene and grooming standards

Getting ready for apprenticeship & Jobs

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

PC29. create a professional Curriculum vitae (Résumé)

PC30. search for suitable jobs using reliable offline and online sources such as Employment exchange, recruitment agencies, newspapers etc. and job portals, respectively

PC31. apply to identified job openings using offline /online methods as per requirement

PC32. answer questions politely, with clarity and confidence, during recruitment and selection

PC33. identify apprenticeship opportunities and register for it as per guidelines and requirements

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

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

KU2. various constitutional and personal values

KU3. different environmentally sustainable practices and their importance

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

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

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

KU7. about effective communication

KU8. POSH Act

KU9. Gender sensitivity and inclusivity

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

KU11. how to compute income and expenditure

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

KU13. different legal rights and laws

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

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

KU16. how to identify business opportunities

KU17. types and needs of customers

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

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

Generic Skills (GS)

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

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

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

Qualification Pack

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

Qualification Pack

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Introduction to Employability Skills</i>	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	-	-

Qualification Pack

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	-	-	-	-

Qualification Pack

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

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/N7115.Prepare the work area and machineries for seed processing	30	40	-	30	100	20
AGR/N7117.Operate the seed processing machineries to process the seeds	30	40	-	30	100	25
AGR/N7122.Pack, weigh and store the seeds	30	40	-	30	100	20
AGR/N7118.Record and maintain the seed processing data	30	40	-	30	100	25
AGR/N9903.Maintain health and safety at the workplace	40	25	-	35	100	5
DGT/VSQ/N0102.Employability Skills (60 Hours)	20	30	-	-	50	5
Total	180	215	-	155	550	100

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.

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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.