

## Qualification Pack



# Service and Maintenance Technician- Farm Machinery

QP Code: AGR/Q1106

Version: 3.0

NSQF Level: 4

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## Qualification Pack

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### AGR/Q1106: Service and Maintenance Technician-Farm Machinery

#### Brief Job Description

A Service and Maintenance Technician - Farm Machinery is responsible for carrying out repair and maintenance of farm machineries such as disc plough and harrow, seed driller, plant protection equipment, reaper, thresher, chaff cutter, sugarcane crusher, etc.

#### Personal Attributes

The individual in this role must have a mechanical aptitude and problem-solving skills. The person must have good reading, writing, and communication skills along with the ability to co-ordinate with others.

#### Applicable National Occupational Standards (NOS)

##### Compulsory NOS:

1. [AGR/N1119: Carry out repair and maintenance of tillage and soil farming equipment](#)
2. [AGR/N1120: Carry out repair and maintenance of seed drills and planters](#)
3. [AGR/N1121: Carry out repair and maintenance of plant protection equipment](#)
4. [AGR/N1122: Carry out repair and maintenance of harvesting and post-harvesting machineries](#)
5. [AGR/N9903: Maintain health and safety at the workplace](#)
6. [DGT/VSQ/N0102: Employability Skills \(60 Hours\)](#)

#### Qualification Pack (QP) Parameters

<b>Sector</b>	Agriculture
<b>Sub-Sector</b>	Agriculture Crop Production
<b>Occupation</b>	Farm Machinery, Equipment Operation and Maintenance
<b>Country</b>	India
<b>NSQF Level</b>	4
<b>Credits</b>	13

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<b>Aligned to NCO/ISCO/ISIC Code</b>	NCO-2015/7233.2800
<b>Minimum Educational Qualification &amp; Experience</b>	12th grade Pass OR Completed 2nd year of the 3-year diploma after 10 (and pursuing regular diploma) OR 10th grade pass (plus 2-year NTC) OR 10th grade pass (plus 1-year NTC plus 1 year NAC) OR 8th grade pass with 2 year NTC plus 1 year NAC plus 1 year CITS OR 10th grade pass and pursuing continuous schooling OR Previous relevant Qualification of NSQF Level (Level 3.0 with minimum education as 8th Grade pass) with 3 Years of experience relevant experience OR Previous relevant Qualification of NSQF Level (Level 3.5 with 1.5- year relevant experience)
<b>Minimum Level of Education for Training in School</b>	
<b>Pre-Requisite License or Training</b>	NA
<b>Minimum Job Entry Age</b>	18 Years
<b>Last Reviewed On</b>	NA
<b>Next Review Date</b>	27/05/2024
<b>NSQC Approval Date</b>	27/05/2021
<b>Version</b>	3.0
<b>Reference code on NQR</b>	QG-04-AG-00338-2023-V1.1-ASCI
<b>NQR Version</b>	1.1

## Qualification Pack

# AGR/N1119: Carry out repair and maintenance of tillage and soil farming equipment

## Description

This OS unit is about carrying out repair and maintenance of tillage and soil farming equipment.

## Scope

The scope covers the following :

- Carry out repair and maintenance of mouldboard plough
- Carry out repair and maintenance of disc plough
- Carry out repair and maintenance of disc harrow
- Carry out repair and maintenance of cultivator

## Elements and Performance Criteria

### *Carry out repair and maintenance of mouldboard plough*

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

- PC1.** check the mouldboard plough for smooth movement
- PC2.** inspect that the nuts and bolts are secured tightly
- PC3.** remove soil and any other waste from the mouldboard plough
- PC4.** apply grease/ lubricant on mouldboard plough to prevent rusting
- PC5.** sharpen the bar point and shares
- PC6.** adjust the level of the plough, horizontal suction, vertical suction and draft of the plough
- PC7.** replace any worn-out or damaged parts as per the Standard Operating Procedure (SOP)

### *Carry out repair and maintenance of disc plough*

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

- PC8.** inspect all nuts and bolts for locking and the recommended torque
- PC9.** check the bearings and castle nuts are secured tightly
- PC10.** clean the hub of disc plough using diesel oil
- PC11.** adjust the horizontal disc angle, vertical tilt angle, width of cut, level of plough and scrapper position as per the service manual
- PC12.** change the degree of hub by loosening the mounting bolts when the diameter of disc reduces below the prescribed level
- PC13.** apply the recommended grade of lubricant on bearings, bearing housing, coulter hub and all greasing points
- PC14.** replace the grease nipple if contaminated with soil
- PC15.** replace the worn-out disc plough hub seal with a new one

### *Carry out repair and maintenance of disc harrow*

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

- PC16.** inspect the disc gang angle and gang assembly for wear and tear or damage

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- PC17.** check the scrapper for correct assembly
- PC18.** inspect the depth control system for correct functioning
- PC19.** check the angle of hitch and hitch parts
- PC20.** examine all joints, bolts, nuts and pins for the prescribed torque and locking
- PC21.** measure the disc spacing and diameter for the prescribed dimensions
- PC22.** sharpen the harrow discs
- PC23.** carry out welding on the broken joints
- PC24.** apply the recommended grade of grease/ lubricant on bearing assembly, mating parts and greasing points
- PC25.** replace any damaged discs, spool flanges, gang-bolts and gang bearings as per the SOP
- PC26.** replace the worn out or damaged pins, nuts and bolts with the new ones

### *Carry out repair and maintenance of cultivator*

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

- PC27.** examine the level of the cultivator to ensure all the shovels touch the ground
- PC28.** check the shovel for the correct angle
- PC29.** inspect the tyres for uniform spacing
- PC30.** check the nuts and bolts for the prescribed torque and locking
- PC31.** remove accumulated soil, trash or grease on the cultivator by washing it
- PC32.** apply grease/ lubricant on all nuts and bolts
- PC33.** replace the worn out or damaged shovel points

## Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** applicable health and safety standards and requirements
- KU2.** design and function of commonly used primary and secondary tillage machinery
- KU3.** various components of a mouldboard plough, disc plough, disc harrow and cultivator
- KU4.** common repair and maintenance needs of a mouldboard plough, disc plough, disc harrow and cultivator
- KU5.** relevant environmental and occupational hazards and the ways to deal with them
- KU6.** importance and use of relevant Personal Protective Equipment (PPE)
- KU7.** importance of service and maintenance of tillage machinery
- KU8.** correct handling of various service and maintenance tools and equipment
- KU9.** adjustments of gauge and wheels disc, tilt angle, working depth of tillage machinery
- KU10.** safety measures, possible problems and their remedies for various tillage equipment
- KU11.** correct process to hitch and unhitch implements

## Generic Skills (GS)

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

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- GS1.** write work-related notes
- GS2.** read the relevant guides, manuals literature to get latest information about the field of work
- GS3.** communicate clearly and politely
- GS4.** listen attentively to understand the instructions being given
- GS5.** identify solutions to work-related issues
- GS6.** plan and prioritise tasks to ensure timely completion
- GS7.** take quick decision in case of an emergency/ accident
- GS8.** plan effective use of time and resources

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### Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Carry out repair and maintenance of mouldboard plough</i>	<b>8</b>	<b>12</b>	-	<b>8</b>
<b>PC1.</b> check the mouldboard plough for smooth movement	-	-	-	-
<b>PC2.</b> inspect that the nuts and bolts are secured tightly	-	-	-	-
<b>PC3.</b> remove soil and any other waste from the mouldboard plough	-	-	-	-
<b>PC4.</b> apply grease/ lubricant on mouldboard plough to prevent rusting	-	-	-	-
<b>PC5.</b> sharpen the bar point and shares	-	-	-	-
<b>PC6.</b> adjust the level of the plough, horizontal suction, vertical suction and draft of the plough	-	-	-	-
<b>PC7.</b> replace any worn-out or damaged parts as per the Standard Operating Procedure (SOP)	-	-	-	-
<i>Carry out repair and maintenance of disc plough</i>	<b>8</b>	<b>12</b>	-	<b>8</b>
<b>PC8.</b> inspect all nuts and bolts for locking and the recommended torque	-	-	-	-
<b>PC9.</b> check the bearings and castle nuts are secured tightly	-	-	-	-
<b>PC10.</b> clean the hub of disc plough using diesel oil	-	-	-	-
<b>PC11.</b> adjust the horizontal disc angle, vertical tilt angle, width of cut, level of plough and scrapper position as per the service manual	-	-	-	-
<b>PC12.</b> change the degree of hub by loosening the mounting bolts when the diameter of disc reduces below the prescribed level	-	-	-	-
<b>PC13.</b> apply the recommended grade of lubricant on bearings, bearing housing, coulter hub and all greasing points	-	-	-	-

### Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC14.</b> replace the grease nipple if contaminated with soil	-	-	-	-
<b>PC15.</b> replace the worn-out disc plough hub seal with a new one	-	-	-	-
<i>Carry out repair and maintenance of disc harrow</i>	<b>10</b>	<b>10</b>	-	<b>10</b>
<b>PC16.</b> inspect the disc gang angle and gang assembly for wear and tear or damage	-	-	-	-
<b>PC17.</b> check the scrapper for correct assembly	-	-	-	-
<b>PC18.</b> inspect the depth control system for correct functioning	-	-	-	-
<b>PC19.</b> check the angle of hitch and hitch parts	-	-	-	-
<b>PC20.</b> examine all joints, bolts, nuts and pins for the prescribed torque and locking	-	-	-	-
<b>PC21.</b> measure the disc spacing and diameter for the prescribed dimensions	-	-	-	-
<b>PC22.</b> sharpen the harrow discs	-	-	-	-
<b>PC23.</b> carry out welding on the broken joints	-	-	-	-
<b>PC24.</b> apply the recommended grade of grease/lubricant on bearing assembly, mating parts and greasing points	-	-	-	-
<b>PC25.</b> replace any damaged discs, spool flanges, gang-bolts and gang bearings as per the SOP	-	-	-	-
<b>PC26.</b> replace the worn out or damaged pins, nuts and bolts with the new ones	-	-	-	-
<i>Carry out repair and maintenance of cultivator</i>	<b>4</b>	<b>6</b>	-	<b>4</b>
<b>PC27.</b> examine the level of the cultivator to ensure all the shovels touch the ground	-	-	-	-
<b>PC28.</b> check the shovel for the correct angle	-	-	-	-
<b>PC29.</b> inspect the tyres for uniform spacing	-	-	-	-

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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC30.</b> check the nuts and bolts for the prescribed torque and locking	-	-	-	-
<b>PC31.</b> remove accumulated soil, trash or grease on the cultivator by washing it	-	-	-	-
<b>PC32.</b> apply grease/ lubricant on all nuts and bolts	-	-	-	-
<b>PC33.</b> replace the worn out or damaged shovel points	-	-	-	-
<b>NOS Total</b>	<b>30</b>	<b>40</b>	-	<b>30</b>

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### National Occupational Standards (NOS) Parameters

<b>NOS Code</b>	AGR/N1119
<b>NOS Name</b>	Carry out repair and maintenance of tillage and soil farming equipment
<b>Sector</b>	Agriculture
<b>Sub-Sector</b>	Agriculture Crop Production
<b>Occupation</b>	Farm Machinery, Equipment Operation And Maintenance
<b>NSQF Level</b>	4
<b>Credits</b>	2
<b>Version</b>	2.0
<b>Last Reviewed Date</b>	25/11/2021
<b>Next Review Date</b>	25/11/2024
<b>NSQC Clearance Date</b>	25/11/2021

## Qualification Pack

# AGR/N1120: Carry out repair and maintenance of seed drills and planters

## Description

This OS unit is about carrying out repair and maintenance of seed drills and planters.

## Scope

The scope covers the following :

- Carry out repair and maintenance of seed/ fertilizer boxes and machine/ metering rollers
- Carry out repair and maintenance of power transmission system
- Carry out repair and maintenance of seed and fertilizer metering and application equipment
- Carry out repair and maintenance of seed and fertilizer tubes

## Elements and Performance Criteria

### *Carry out repair and maintenance of seed and fertilizer boxes*

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

- PC1.** empty the seed and fertilizer boxes through the flow gates
- PC2.** clean the seed/ fertilizer boxes and machine rollers as per the SOP
- PC3.** apply grease/ lubricant on seed/ fertilizer boxes and sides of machine rollers to prevent rusting

### *Carry out repair and maintenance of power transmission system*

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

- PC4.** check drive, feed shafts and rotary tiller for unrestricted movement
- PC5.** inspect the axle of wheel for any bends or damages
- PC6.** examine all sprockets for firm connection with their shafts
- PC7.** align sprockets of drive wheel with feed shafts, chain and idler sprocket
- PC8.** apply grease on drive, feed shafts and rotary tiller
- PC9.** replace bent or damaged axle of wheel

### *Carry out repair and maintenance of seed and fertilizer metering and application equipment*

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

- PC10.** remove the rings from the shaft
- PC11.** examine the rings and spoons for any wear and tear or damage
- PC12.** check the drive belt for the required level of tension
- PC13.** check the lever for free movement on both sides of the fertilizer box
- PC14.** inspect the bed shaper for the correct position
- PC15.** adjust the seed and fertilizer application rate to the recommended settings
- PC16.** rotate the sprocket in the seeding equipment as per the requirement
- PC17.** set the required spacing between furrow openers and ridgers
- PC18.** place rings at equal distance in the seed cups
- PC19.** tighten all nuts and bolts in the seed and fertilizer metering and application systems

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**PC20.** clean the fertilizer application equipment

**PC21.** apply lubricant on the fertilizer and seed application equipment to prevent rusting

*Carry out repair and maintenance of seed and fertilizer tubes*

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

**PC22.** inspect the seed/ fertilizer tubes for bends/ wear and tear/ damage

**PC23.** replace the worn-out or damaged seed/ fertilizer tubes as per the service manual

**PC24.** clamp the seed/ fertilizer tubes to seed/fertilizer cups firmly

**PC25.** arrange for protection of tubes from bending and breakage

## Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

**KU1.** various components of a seed and fertilizer box, drive/power transmission system, seed and fertilizer metering mechanisms and application equipment, seed/ fertilizer tubes

**KU2.** common repair and maintenance needs of a seed and fertilizer box, drive/power transmission system, seed and fertilizer metering and application systems, seed/ fertilizer tubes

**KU3.** various attachments used with seed drills and planters

**KU4.** relevant repair and maintenance tools and equipment and their correct use

**KU5.** relevant adjustments required to be made to a seed drill

**KU6.** crop cycle for different types of crop

**KU7.** dangerous Machines (Regulation) Act, 1983

**KU8.** relevant occupational and environmental hazards and the ways to deal with them

## Generic Skills (GS)

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

**GS1.** write work-related notes

**GS2.** read the relevant literature to get latest updates about the field of work

**GS3.** communicate clearly and respectfully

**GS4.** listen attentively to understand the instructions being given

**GS5.** plan and prioritise tasks to ensure timely completion of critical tasks

**GS6.** co-ordinate with co-workers to achieve work objectives

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

**GS8.** evaluate all possible solutions to a problem before selecting the best one

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### Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Carry out repair and maintenance of seed and fertilizer boxes</i>	<b>5</b>	<b>8</b>	-	<b>5</b>
<b>PC1.</b> empty the seed and fertilizer boxes through the flow gates	-	-	-	-
<b>PC2.</b> clean the seed/ fertilizer boxes and machine rollers as per the SOP	-	-	-	-
<b>PC3.</b> apply grease/ lubricant on seed/ fertilizer boxes and sides of machine rollers to prevent rusting	-	-	-	-
<i>Carry out repair and maintenance of power transmission system</i>	<b>5</b>	<b>8</b>	-	<b>5</b>
<b>PC4.</b> check drive, feed shafts and rotary tiller for unrestricted movement	-	-	-	-
<b>PC5.</b> inspect the axle of wheel for any bends or damages	-	-	-	-
<b>PC6.</b> examine all sprockets for firm connection with their shafts	-	-	-	-
<b>PC7.</b> align sprockets of drive wheel with feed shafts, chain and idler sprocket	-	-	-	-
<b>PC8.</b> apply grease on drive, feed shafts and rotary tiller	-	-	-	-
<b>PC9.</b> replace bent or damaged axle of wheel	-	-	-	-
<i>Carry out repair and maintenance of seed and fertilizer metering and application equipment</i>	<b>15</b>	<b>17</b>	-	<b>15</b>
<b>PC10.</b> remove the rings from the shaft	-	-	-	-
<b>PC11.</b> examine the rings and spoons for any wear and tear or damage	-	-	-	-
<b>PC12.</b> check the drive belt for the required level of tension	-	-	-	-
<b>PC13.</b> check the lever for free movement on both sides of the fertilizer box	-	-	-	-

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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC14.</b> inspect the bed shaper for the correct position	-	-	-	-
<b>PC15.</b> adjust the seed and fertilizer application rate to the recommended settings	-	-	-	-
<b>PC16.</b> rotate the sprocket in the seeding equipment as per the requirement	-	-	-	-
<b>PC17.</b> set the required spacing between furrow openers and ridgers	-	-	-	-
<b>PC18.</b> place rings at equal distance in the seed cups	-	-	-	-
<b>PC19.</b> tighten all nuts and bolts in the seed and fertilizer metering and application systems	-	-	-	-
<b>PC20.</b> clean the fertilizer application equipment	-	-	-	-
<b>PC21.</b> apply lubricant on the fertilizer and seed application equipment to prevent rusting	-	-	-	-
<i>Carry out repair and maintenance of seed and fertilizer tubes</i>	<b>5</b>	<b>7</b>	-	<b>5</b>
<b>PC22.</b> inspect the seed/ fertilizer tubes for bends/ wear and tear/ damage	-	-	-	-
<b>PC23.</b> replace the worn-out or damaged seed/ fertilizer tubes as per the service manual	-	-	-	-
<b>PC24.</b> clamp the seed/ fertilizer tubes to seed/fertilizer cups firmly	-	-	-	-
<b>PC25.</b> arrange for protection of tubes from bending and breakage	-	-	-	-
<b>NOS Total</b>	<b>30</b>	<b>40</b>	-	<b>30</b>

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### National Occupational Standards (NOS) Parameters

<b>NOS Code</b>	AGR/N1120
<b>NOS Name</b>	Carry out repair and maintenance of seed drills and planters
<b>Sector</b>	Agriculture
<b>Sub-Sector</b>	Agriculture Crop Production
<b>Occupation</b>	Farm Machinery, Equipment Operation And Maintenance
<b>NSQF Level</b>	4
<b>Credits</b>	1
<b>Version</b>	2.0
<b>Last Reviewed Date</b>	NA
<b>Next Review Date</b>	27/05/2024
<b>NSQC Clearance Date</b>	27/05/2021

## Qualification Pack

# AGR/N1121: Carry out repair and maintenance of plant protection equipment

## Description

This OS unit is about carrying out repair and maintenance of plant protection equipment.

## Scope

The scope covers the following :

- Check and clean the tank, nozzle and filters
- Carry out maintenance of pump assembly and pressure regulator
- Ensure health and safety during operations
- Optimise resource utilisation

## Elements and Performance Criteria

### *Check and clean the tank, nozzle and filters*

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

- PC1.** inspect the delivery hose joints for wear and tear or damage
- PC2.** clean the tank using clean water after removing the nozzle as per the SOP
- PC3.** clean the strainers and delivery hoses using clean water
- PC4.** test the tank for leakage by immersing it in water
- PC5.** fix the nozzle correctly after cleaning

### *Carry out maintenance of pump assembly and pressure regulator*

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

- PC6.** inspect the pump assembly, plunger rod, piston parts, gaskets, piston rings and washers for wear and tear/damage
- PC7.** examine the by-pass and cut-off valve in engine-controlled sprayer for wear and tear/damage
- PC8.** examine all nuts and bolts for tightness
- PC9.** check the calibration of the equipment
- PC10.** examine the pump lever and lock nut connecting the piston and lever for correct position
- PC11.** check the belt for the required level of tension
- PC12.** apply grease/ lubricant on plunger rod and piston parts
- PC13.** replace any damaged parts as per the SOP

### *Ensure health and safety during operations*

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

- PC14.** use protective equipment and clothing such as face mask, respirators, hand gloves, boots while carrying out repair and maintenance activities
- PC15.** follow the organisational emergency policy in case of an accident/ emergency
- PC16.** administer first aid correctly

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**PC17.** report workplace emergencies/ accidents as per the organisational policy

### *Optimise resource utilisation*

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

**PC18.** optimise usage of various material in different tasks/ activities/ processes

**PC19.** optimise usage of electricity/energy in various tasks/ activities/ processes

**PC20.** connect electrical tools and equipment safely and turn off when not in use

**PC21.** segregate waste into different categories

**PC22.** dispose non-recyclable waste appropriately

**PC23.** deposit recyclable and reusable material at the identified location

## Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

**KU1.** relevant documentation requirements in the job role

**KU2.** safe handling of various chemicals used in plant protection

**KU3.** basic components of a sprayer and duster

**KU4.** different types of nozzles

**KU5.** common repair and maintenance needs of different types of planting equipment

**KU6.** defects and adjustments of various components of a sprayer/ duster

**KU7.** composition and the process of formulating various plant protection chemicals

**KU8.** calibration of plant protection equipment

**KU9.** first aid and treatment for chemical poisoning

**KU10.** importance and correct use of relevant PPE and clothing

**KU11.** organisational procedure to deal with workplace emergencies/ accidents

**KU12.** Dangerous Machines (Regulation) Act, 1983

**KU13.** relevant environmental and occupational hazards

**KU14.** waste management and methods of waste disposal

**KU15.** common sources of pollution and ways to minimise it

**KU16.** importance of following environmental and ecological best practices to minimise the impact on the environment

**KU17.** benefits of resource optimisation

**KU18.** ways of efficiently managing various materials used in operations

**KU19.** common practices of conserving electricity

## Generic Skills (GS)

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

**GS1.** note work-related notes and observations

**GS2.** read the relevant guides, manuals, policies and schemes

**GS3.** communicate politely and professionally

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- GS4.** listen attentively to understand the client requirements
- GS5.** plan and prioritise tasks to ensure timely completion
- GS6.** apply domain knowledge and information to improve work processes
- GS7.** identify disruptions to work and take preventive measures
- GS8.** evaluate all possible solutions to a problem before selecting the best one

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### Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Check and clean the tank, nozzle and filters</i>	<b>7</b>	<b>8</b>	-	<b>10</b>
<b>PC1.</b> inspect the delivery hose joints for wear and tear or damage	-	-	-	-
<b>PC2.</b> clean the tank using clean water after removing the nozzle as per the SOP	-	-	-	-
<b>PC3.</b> clean the strainers and delivery hoses using clean water	-	-	-	-
<b>PC4.</b> test the tank for leakage by immersing it in water	-	-	-	-
<b>PC5.</b> fix the nozzle correctly after cleaning	-	-	-	-
<i>Carry out maintenance of pump assembly and pressure regulator</i>	<b>10</b>	<b>12</b>	-	<b>10</b>
<b>PC6.</b> inspect the pump assembly, plunger rod, piston parts, gaskets, piston rings and washers for wear and tear/damage	-	-	-	-
<b>PC7.</b> examine the by-pass and cut-off valve in engine-controlled sprayer for wear and tear/damage	-	-	-	-
<b>PC8.</b> examine all nuts and bolts for tightness	-	-	-	-
<b>PC9.</b> check the calibration of the equipment	-	-	-	-
<b>PC10.</b> examine the pump lever and lock nut connecting the piston and lever for correct position	-	-	-	-
<b>PC11.</b> check the belt for the required level of tension	-	-	-	-
<b>PC12.</b> apply grease/ lubricant on plunger rod and piston parts	-	-	-	-
<b>PC13.</b> replace any damaged parts as per the SOP	-	-	-	-
<i>Ensure health and safety during operations</i>	<b>6</b>	<b>10</b>	-	<b>5</b>

### Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC14.</b> use protective equipment and clothing such as face mask, respirators, hand gloves, boots while carrying out repair and maintenance activities	-	-	-	-
<b>PC15.</b> follow the organisational emergency policy in case of an accident/ emergency	-	-	-	-
<b>PC16.</b> administer first aid correctly	-	-	-	-
<b>PC17.</b> report workplace emergencies/ accidents as per the organisational policy	-	-	-	-
<i>Optimise resource utilisation</i>	<b>7</b>	<b>10</b>	-	<b>5</b>
<b>PC18.</b> optimise usage of various material in different tasks/ activities/ processes	-	-	-	-
<b>PC19.</b> optimise usage of electricity/energy in various tasks/ activities/ processes	-	-	-	-
<b>PC20.</b> connect electrical tools and equipment safely and turn off when not in use	-	-	-	-
<b>PC21.</b> segregate waste into different categories	-	-	-	-
<b>PC22.</b> dispose non-recyclable waste appropriately	-	-	-	-
<b>PC23.</b> deposit recyclable and reusable material at the identified location	-	-	-	-
<b>NOS Total</b>	<b>30</b>	<b>40</b>	-	<b>30</b>

## Qualification Pack

### National Occupational Standards (NOS) Parameters

<b>NOS Code</b>	AGR/N1121
<b>NOS Name</b>	Carry out repair and maintenance of plant protection equipment
<b>Sector</b>	Agriculture
<b>Sub-Sector</b>	Agriculture Crop Production
<b>Occupation</b>	Farm Machinery, Equipment Operation And Maintenance
<b>NSQF Level</b>	4
<b>Credits</b>	1
<b>Version</b>	2.0
<b>Last Reviewed Date</b>	NA
<b>Next Review Date</b>	27/05/2024
<b>NSQC Clearance Date</b>	27/05/2021

## Qualification Pack

# AGR/N1122: Carry out repair and maintenance of harvesting and post-harvesting machineries

## Description

This OS unit is about carrying out repair and maintenance of harvesting, threshing and post-harvesting machineries.

## Scope

The scope covers the following :

- Carry out repair and maintenance of reaper
- Carry out repair and maintenance of thresher
- Carry out repair and maintenance of post-harvesting machineries

## Elements and Performance Criteria

### *Carry out repair and maintenance of reaper*

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

- PC1.** examine crop-row divider and cutter bar for any wear and tear or damage
- PC2.** check the reel belt for the required level of tension
- PC3.** inspect drive pulley key and the belt for a secure connection
- PC4.** check the v-belt for the required level of tension
- PC5.** check all the nuts, bolts and reaper components are secured firmly
- PC6.** examine the conveyor belt, v-belt, cutter bar, knife, star wheels, pressure springs and lugs for any damages
- PC7.** clean the reaper guards
- PC8.** apply lubricant on the greasing points as per the maintenance schedule
- PC9.** apply paint on the machine body as per the requirement
- PC10.** adjust height of the reel to ensure correct gathering of crop
- PC11.** adjust the belt tension and blades for the optimum cut length
- PC12.** adjust the twine tension using spring loaded screw-bolt
- PC13.** adjust the tension in trigger spring to get the required bundle size
- PC14.** test the feeding mechanism for correct functioning

### *Carry out repair and maintenance of thresher*

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

- PC15.** examine the sieve and conclave for the correct size
- PC16.** inspect the thresher belt for the prescribed level of tension
- PC17.** examine all nuts and bolts for tightness
- PC18.** remove residue of grain and chaff from the thresher
- PC19.** smoothen rough grooves on the pulley surface using a fine file
- PC20.** adjust the base angle of feeding chute for the optimum feed rate

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- PC21.** apply lubricant on all the moving parts to control wear and tear
- PC22.** adjust concave gap and clearance as per the operator's manual
- PC23.** adjust the reel height and idler pulley
- PC24.** smoothen the face of pliers using emery paper
- PC25.** tighten all the pegs on the threshing cylinder
- PC26.** refill engine oil and fuel to maintain the recommended levels
- PC27.** set cylinder-concave clearance and sieve slope as per the operator's manual
- PC28.** set the recommended speed of blower/aspirator, sieves, and threshing cylinder
- PC29.** test the threshing cylinder for correct direction of rotation and any interference by rotating it manually
- PC30.** set the recommended speed of blower/aspirator, sieves, and threshing cylinder

### *Carry out repair and maintenance of post-harvesting machineries*

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

- PC31.** dismantle the post-harvesting machineries such as cleaner/ grader, drying equipment, rice/ flour/ spice mill, oil expelling machines, chaff cutters etc.
- PC32.** clean the components of post-harvest machineries
- PC33.** inspect the sieves and hoppers for correct oscillation and any wear and tear/ damage
- PC34.** examine the drying chamber, heating system and air distribution system of the dryer for wear and tear and correct functioning
- PC35.** inspect the relevant components of mills and oil expelling machines for wear and tear and correct functioning
- PC36.** inspect the feeding chute, drive mechanism, blade sharpness and gear condition for wear and tear and correct functioning
- PC37.** replace all worn-out or damaged components as per the service manual
- PC38.** adjust the cleaner feed rate, air flow rate, frequency and amplitude of oscillations to recommended settings
- PC39.** adjust the correct air temperature and grain flow rate in the dryer
- PC40.** apply correct settings in the mills for optimum results such as adjustments to plating space, Revolutions Per Minute (RPM), screen size, spacing between rubber rolls, etc
- PC41.** apply the recommended adjustments to feeding roller gap, cutting gap in chaff cutters
- PC42.** adjust the hydraulic press for correct feed rate, operating pressure, moisture and temperature of oilseeds

## Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** relevant health and safety standards and practices
- KU2.** various components of reapers and power threshers such as cutter bar, reel/ star wheel, windrower, threshing drum, sieves, blowers/ aspirators, etc.
- KU3.** various types of attachments used with post-harvest equipment
- KU4.** relevant adjustments to operate post-harvest equipment
- KU5.** common defects with reapers, threshers and post-harvest equipment

## Qualification Pack

- KU6.** service and maintenance procedures for harvesting and post-harvest machineries
- KU7.** use of tools and equipment used in service and maintenance activities
- KU8.** correct process to replace components in different types of reapers, threshers and post-harvest equipment
- KU9.** importance of carrying out regular maintenance and repair
- KU10.** Dangerous Machines (Regulation) Act, 1983

## Generic Skills (GS)

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

- GS1.** write work-related notes
- GS2.** read the relevant guides, manuals, policies and schemes
- GS3.** communicate clearly and politely
- GS4.** listen attentively to understand the client requirements and instructions
- GS5.** identify possible disruptions to work and take preventive measures
- GS6.** plan efficient use of tools, equipment and resources
- GS7.** plan and prioritise tasks to achieve work-efficiency
- GS8.** apply domain knowledge and information to identify relevant improvements in work processes

## Qualification Pack

### Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Carry out repair and maintenance of reaper</i>	<b>10</b>	<b>15</b>	-	<b>10</b>
<b>PC1.</b> examine crop-row divider and cutter bar for any wear and tear or damage	-	-	-	-
<b>PC2.</b> check the reel belt for the required level of tension	-	-	-	-
<b>PC3.</b> inspect drive pulley key and the belt for a secure connection	-	-	-	-
<b>PC4.</b> check the v-belt for the required level of tension	-	-	-	-
<b>PC5.</b> check all the nuts, bolts and reaper components are secured firmly	-	-	-	-
<b>PC6.</b> examine the conveyor belt, v-belt, cutter bar, knife, star wheels, pressure springs and lugs for any damages	-	-	-	-
<b>PC7.</b> clean the reaper guards	-	-	-	-
<b>PC8.</b> apply lubricant on the greasing points as per the maintenance schedule	-	-	-	-
<b>PC9.</b> apply paint on the machine body as per the requirement	-	-	-	-
<b>PC10.</b> adjust height of the reel to ensure correct gathering of crop	-	-	-	-
<b>PC11.</b> adjust the belt tension and blades for the optimum cut length	-	-	-	-
<b>PC12.</b> adjust the twine tension using spring loaded screw-bolt	-	-	-	-
<b>PC13.</b> adjust the tension in trigger spring to get the required bundle size	-	-	-	-
<b>PC14.</b> test the feeding mechanism for correct functioning	-	-	-	-
<i>Carry out repair and maintenance of thresher</i>	<b>10</b>	<b>15</b>	-	<b>10</b>

### Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC15.</b> examine the sieve and conclave for the correct size	-	-	-	-
<b>PC16.</b> inspect the thresher belt for the prescribed level of tension	-	-	-	-
<b>PC17.</b> examine all nuts and bolts for tightness	-	-	-	-
<b>PC18.</b> remove residue of grain and chaff from the thresher	-	-	-	-
<b>PC19.</b> smoothen rough grooves on the pulley surface using a fine file	-	-	-	-
<b>PC20.</b> adjust the base angle of feeding chute for the optimum feed rate	-	-	-	-
<b>PC21.</b> apply lubricant on all the moving parts to control wear and tear	-	-	-	-
<b>PC22.</b> adjust concave gap and clearance as per the operator's manual	-	-	-	-
<b>PC23.</b> adjust the reel height and idler pulley	-	-	-	-
<b>PC24.</b> smoothen the face of pliers using emery paper	-	-	-	-
<b>PC25.</b> tighten all the pegs on the threshing cylinder	-	-	-	-
<b>PC26.</b> refill engine oil and fuel to maintain the recommended levels	-	-	-	-
<b>PC27.</b> set cylinder-concave clearance and sieve slope as per the operator's manual	-	-	-	-
<b>PC28.</b> set the recommended speed of blower/aspirator, sieves, and threshing cylinder	-	-	-	-
<b>PC29.</b> test the threshing cylinder for correct direction of rotation and any interference by rotating it manually	-	-	-	-
<b>PC30.</b> set the recommended speed of blower/aspirator, sieves, and threshing cylinder	-	-	-	-

### Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Carry out repair and maintenance of post-harvesting machineries</i>	<b>10</b>	<b>10</b>	-	<b>10</b>
<b>PC31.</b> dismantle the post-harvesting machineries such as cleaner/ grader, drying equipment, rice/ flour/ spice mill, oil expelling machines, chaff cutters etc.	-	-	-	-
<b>PC32.</b> clean the components of post-harvest machineries	-	-	-	-
<b>PC33.</b> inspect the sieves and hoppers for correct oscillation and any wear and tear/ damage	-	-	-	-
<b>PC34.</b> examine the drying chamber, heating system and air distribution system of the dryer for wear and tear and correct functioning	-	-	-	-
<b>PC35.</b> inspect the relevant components of mills and oil expelling machines for wear and tear and correct functioning	-	-	-	-
<b>PC36.</b> inspect the feeding chute, drive mechanism, blade sharpness and gear condition for wear and tear and correct functioning	-	-	-	-
<b>PC37.</b> replace all worn-out or damaged components as per the service manual	-	-	-	-
<b>PC38.</b> adjust the cleaner feed rate, air flow rate, frequency and amplitude of oscillations to recommended settings	-	-	-	-
<b>PC39.</b> adjust the correct air temperature and grain flow rate in the dryer	-	-	-	-
<b>PC40.</b> apply correct settings in the mills for optimum results such as adjustments to plating space, Revolutions Per Minute (RPM), screen size, spacing between rubber rolls, etc	-	-	-	-
<b>PC41.</b> apply the recommended adjustments to feeding roller gap, cutting gap in chaff cutters	-	-	-	-
<b>PC42.</b> adjust the hydraulic press for correct feed rate, operating pressure, moisture and temperature of oilseeds	-	-	-	-

### Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>NOS Total</b>	<b>30</b>	<b>40</b>	<b>-</b>	<b>30</b>

## Qualification Pack

### National Occupational Standards (NOS) Parameters

<b>NOS Code</b>	AGR/N1122
<b>NOS Name</b>	Carry out repair and maintenance of harvesting and post-harvesting machineries
<b>Sector</b>	Agriculture
<b>Sub-Sector</b>	Agriculture Crop Production
<b>Occupation</b>	Farm Machinery, Equipment Operation And Maintenance
<b>NSQF Level</b>	4
<b>Credits</b>	2
<b>Version</b>	2.0
<b>Last Reviewed Date</b>	NA
<b>Next Review Date</b>	15/08/2023
<b>NSQC Clearance Date</b>	15/02/2023

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

### Qualification Pack

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

## Qualification Pack

### National Occupational Standards (NOS) Parameters

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

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

## Qualification Pack

### Assessment Criteria

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

### Qualification Pack

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

### Qualification Pack

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

## Qualification Pack

### National Occupational Standards (NOS) Parameters

<b>NOS Code</b>	DGT/VSQ/N0102
<b>NOS Name</b>	Employability Skills (60 Hours)
<b>Sector</b>	Cross Sectoral
<b>Sub-Sector</b>	Professional Skills
<b>Occupation</b>	Employability
<b>NSQF Level</b>	4
<b>Credits</b>	2
<b>Version</b>	1.0
<b>Last Reviewed Date</b>	NA
<b>Next Review Date</b>	27/05/2024
<b>NSQC Clearance Date</b>	27/05/2021

## 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/N1119.Carry out repair and maintenance of tillage and soil farming equipment	30	40	-	30	100	20
AGR/N1120.Carry out repair and maintenance of seed drills and planters	30	40	-	30	100	20
AGR/N1121.Carry out repair and maintenance of plant protection equipment	30	40	-	30	100	20
AGR/N1122.Carry out repair and maintenance of harvesting and post-harvesting machineries	30	40	-	30	100	20
AGR/N9903.Maintain health and safety at the workplace	40	25	-	35	100	15
DGT/VSQ/N0102.Employability Skills (60 Hours)	20	30	0	0	50	5
<b>Total</b>	<b>180</b>	<b>215</b>	<b>-</b>	<b>155</b>	<b>550</b>	<b>100</b>

## Qualification Pack

### Acronyms

<b>NOS</b>	National Occupational Standard(s)
<b>NSQF</b>	National Skills Qualifications Framework
<b>QP</b>	Qualifications Pack
<b>TVET</b>	Technical and Vocational Education and Training
<b>PwD</b>	Persons with Disabilities
<b>PPE</b>	Personal Protective Equipment
<b>PPE</b>	Personal Protective Equipment

## Qualification Pack

### Glossary

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

## Qualification Pack

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