

**Assessment Evidence  
Guide**

**For**

**“Seed Processing Plant  
Technician”**

**Level-5**

**Operate Advance Seed Processing  
Machineries**

**(Formative Assessment)**



**National Vocational & Technical  
Training Commission**

## Instruction Sheet for the Candidate

<b>Title of Qualification:</b> National Vocational Diploma Level 5 in Seed Processing and Biotechnology (Seed Processing Plant Technician)	<b>CS Code:</b>	<b>Level:</b> 5	<b>Version:</b> 01
<b>Competency Standard Title:</b> Operate Advance Seed Processing Machineries	<b>Assessment Date (DD/MM/YY):</b>  <b>Assessment Time:</b>		

Candidate Details	Name: .....  Registration/Roll Number:.....
Guidance for Candidate	<p><b>To meet this standard, you are required to complete the following within the given time frame (for practical demonstration &amp; assessment):</b></p> <p><b>Assessment Task 1:</b> Candidate is required to prepare for seed processing operations as per instruction given by assessor</p> <p><b>Assessment Task 2:</b> Candidate is required to operate seed processing machines assign by assessor</p> <ul style="list-style-type: none"> <li>✓ Seed separation</li> <li>✓ Seed polishing</li> <li>✓ Seed treatment</li> <li>✓ Seed packaging</li> </ul> <p><b>And complete:</b></p> <ol style="list-style-type: none"> <li>1. Knowledge assessment test (Written or Oral)</li> <li>2. Portfolios at the time of assessment (if any)</li> </ol>
Minimum Evidence Required	<p><b>During a practical assessment, under observation by an assessor, you will complete:</b></p> <p><b>Assessment Task 1</b></p> <p><b>Performance Criteria 1:</b> Arrange tools and equipment</p> <p><b>Performance Criteria 2:</b> Perform cleanliness of required machinery</p> <p><b>Performance Criteria 3:</b> Maintain hygienic conditions of workplace</p> <p><b>Performance Criteria 4:</b> Perform sanitization of tools</p> <p><b>Performance Criteria 5:</b> Calibrate required tools and equipment</p> <p><b>Performance Criteria 6:</b> Perform trouble shooting</p> <p><b>Performance Criteria 7:</b> Follow standard safety checks before and after use of machinery</p>

Minimum Evidence Required	<p><b>Assessment Task 2</b></p> <p><b>Performance Criteria 1:</b> Operate seed separator according to SOPs</p> <p><b>Performance Criteria 2:</b> Operate color grader according to SOPs</p> <p><b>Performance Criteria 3:</b> Operate seed polishing machines according to SOPs</p> <p><b>Performance Criteria 4:</b> Operate seed treatment machines according to SOPs</p> <p><b>Performance Criteria 5:</b> Operate seed packaging machines according to SOPs</p> <p><b>Performance Criteria 6:</b> Follow health and safety guidelines</p> <p><b>Performance Criteria 7:</b> Maintain records</p>
---------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

# Assessors Judgment Guide

(To be completed by the Assessor and signed both by the assessor and the candidate after the assessment)

<b>Candidate Details</b>	Name: ..... Registration/Roll Number: ..... Candidate Signature: .....
<b>Assessment Outcome</b>	COMPETENT <input type="checkbox"/> NOT YET COMPETENT <input type="checkbox"/> Name of the Assessor:..... Assessor's code:..... Signature of the Assessor: .....

Assessment Summary (to be filled by the assessor)							
Activity	Method					Result	
Nature of Activity	Written	Oral	Observation	Portfolio	Role Play	Competent	Not Yet Competent
Practical Skill Demonstration			✓				
Knowledge Assessment	✓	✓					
Other Requirement							

## Observation Checklist

<b>Assessment Task 1</b>	<b>Description of Assessment Task 1</b> Prepare for seed processing operations as per instruction given by assessor.			
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1.	Arrange tools and equipment			
2.	Perform cleanliness of required machinery			
3.	Maintain hygienic conditions of workplace			
4.	Perform sanitization of tools			
5.	Calibrate required tools and equipment			
6.	Perform trouble shooting			
7.	Follow standard safety checks before and after use of machinery			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

<b>Assessment Task 2</b>	<b>Description of Assessment Task 2</b> Operate seed processing machines assign by assessor <ul style="list-style-type: none"> <li>✓ Seed separation</li> <li>✓ Seed polishing</li> <li>✓ Seed treatment</li> <li>✓ Seed packaging</li> </ul>			
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1.	Operate seed Separator according to SOPs			
2.	Operate Colour grader according to SOPs			
3.	Operate seed polishing machines according to SOPs			
4.	Operate seed treatment machines according to SOPs			
5.	Operate seed packaging machines according to SOPs			
6.	Follow health and safety guidelines			
7.	Maintain records			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

## Knowledge Assessment

<b>Title of Qualification:</b> National Vocational Diploma Level 5 in Seed Processing and Biotechnology (Seed Processing Plant Technician)	<b>CS Code:</b>	<b>Level:</b> 5	<b>Version:</b> 01
<b>Competency Standard Title:</b> Operate Advance Seed Processing Machineries	<b>Assessment Date (DD/MM/YY):</b>  <b>Assessment Time:</b> 30 min		

Guidance for Candidate	<b>To complete your assessment for this Competency Standard, you need to answer the questions on the following pages successfully.</b>
------------------------------	----------------------------------------------------------------------------------------------------------------------------------------

Candidate Details	Name: ..... Registration/Roll Number: ..... Candidate Signature: .....
Written Assessment Outcome	COMPETENT <input type="checkbox"/> NOT YET COMPETENT <input type="checkbox"/> Name of the Assessor:..... Assessor's code: Signature of the Assessor: .....

<b>Questions</b> (Candidate confidently answered questions correctly and demonstrated understanding of the topics and their application)	
1. What is seed processing?	
2. Explain the purpose of seed processing?	
3. What are the advantages of seed processing?	

**Questions** (Candidate confidently answered questions correctly and demonstrated understanding of the topics and their application)

4. Describe the activities involved in seed processing?	
5. What is seed scalper?	
6. Explain seed treatment and enlist different seed treatment chemicals.	

## **ANSWER KEY**

<b>Sr.</b>	<b>Answers</b>
1.	Seed processing is the preparation of harvested seed for marketing to farmers
2.	The ultimate goal of seed processing is to obtain the maximum percentage of pure seed with maximum germination potential. The threshed seed is heterogeneous in nature processing brings homogeneity in the seed and the homogeneity helps in obtaining uniformity in the field.
3.	Theses includes improve more uniform planting rates by proper sizing, improve seed marketing, improve seed quality and to prevent spread of weed seed
4.	Theses includes drying, cleaning, sorting, grading, packaging, labeling and storage
5.	Seed scalper removes the larger inert matter from seeds.
6.	Seed treatment or seed dressing is a chemical, typically antimicrobial or fungicidal treatment with which seeds are treated before planting. The chemical includes, <ul style="list-style-type: none"><li>• Pythium</li><li>• Metalaxyl</li><li>• Azoxystrobin</li><li>• Captan</li><li>• Thiram</li><li>• Carboxin etc.</li></ul>



**Assessment Evidence Guide**  
**For**  
**“Seed Processing Plant  
Technician”**

**Level-5**

**Perform Seed Quality Test**  
**(Formative Assessment)**



**National Vocational & Technical  
Training Commission**

## Instruction Sheet for the Candidate

<b>Title of Qualification:</b> National Vocational Diploma Level 5 in Seed Processing and Biotechnology (Seed Processing Plant Technician)	<b>CS Code:</b>	<b>Level:</b> 5	<b>Version:</b> 01
<b>Competency Standard Title:</b> Perform Seed Quality Test	<b>Assessment Date (DD/MM/YY):</b>  <b>Assessment Time :</b>		

Candidate Details	Name: .....
	Registration/Roll Number: .....

<p>Guidance for Candidate</p>	<p><b>To meet this standard, you are required to complete the following within the given time frame (for practical demonstration &amp; assessment):</b></p> <p><b>Assessment Task 1:</b> Candidate is required to collect sample for seed testing assign by assessor.</p> <p><b>Assessment Task 2:</b> Candidate is required to perform:</p> <ul style="list-style-type: none"> <li>✓ Warm Germination</li> <li>✓ Sand Germination</li> <li>✓ Tetrazolium (TZ) test</li> <li>✓ Soak test</li> <li>✓ Blotter paper test</li> <li>✓ Agar plate test</li> </ul> <p>As per instruction given by assessor.</p> <p><b>Assessment Task 3:</b> Candidate is required to:</p> <ul style="list-style-type: none"> <li>✓ perform ELISA Assay</li> <li>✓ prepare test reports</li> </ul> <p>As per instruction given by assessor.</p> <p><b>Assessment Task 4:</b> Candidate is required to perform vigor test</p> <ul style="list-style-type: none"> <li>✓ Conductivity test</li> <li>✓ Paper piercing test</li> <li>✓ Hiltner test</li> <li>✓ Cold test</li> <li>✓ Accelerated Aging test</li> </ul> <p>As per instruction given by assessor.</p> <p><b>Assessment Task 5:</b> Candidate is required to perform moisture determination test</p> <ul style="list-style-type: none"> <li>✓ Desiccation test</li> <li>✓ Oven drying method</li> <li>✓ Karl Fishers method</li> <li>✓ Distillation method</li> </ul> <p>As per instruction given by assessor.</p> <p><b>And complete:</b></p> <ol style="list-style-type: none"> <li>1. Knowledge assessment test (Written or Oral)</li> <li>2. Portfolios at the time of assessment (if any)</li> </ol>
<p>Minimum Evidence Required</p>	<p><b>During a practical assessment, under observation by an assessor, you will complete:</b></p> <p><b>Assessment Task 1</b></p> <p><b>Performance Criteria 1:</b> Collect sample for testing</p> <p><b>Performance Criteria 2:</b> Prepare sample according to required quality test</p> <p><b>Performance Criteria 3:</b> Follow health and safety guidelines</p> <p><b>Performance Criteria 4:</b> Maintain records</p>

	<p><b>Assessment Task 2</b></p> <p><b>Performance Criteria 1:</b> Arrange tools and equipment</p> <p><b>Performance Criteria 2:</b> Perform warm germination test</p> <p><b>Performance Criteria 3:</b> Perform sand germination test</p> <p><b>Performance Criteria 4:</b> Perform Tetrazolium (TZ) test</p> <p><b>Performance Criteria 5:</b> Perform Soak test</p> <p><b>Performance Criteria 6:</b> Perform blotter paper test</p> <p><b>Performance Criteria 7:</b> Perform agar plate test</p> <p><b>Performance Criteria 8:</b> Record results</p> <p><b>Performance Criteria 9:</b> Prepare reports</p>
	<p><b>Assessment Task 3</b></p> <p><b>Performance Criteria 1:</b> Prepare for work</p> <p><b>Performance Criteria 2:</b> Perform ELISA</p> <p><b>Performance Criteria 3:</b> Prepare reports</p>
	<p><b>Assessment Task 4</b></p> <p><b>Performance Criteria 1:</b> Arrange tools and equipment</p> <p><b>Performance Criteria 2:</b> Test seed vigour according to method</p> <p><b>Performance Criteria 3:</b> Record results</p> <p><b>Performance Criteria 4:</b> Prepare report</p> <p><b>Performance Criteria 5:</b> Maintain records</p>
	<p><b>Assessment Task 5</b></p> <p><b>Performance Criteria 1:</b> Arrange tools and equipment</p> <p><b>Performance Criteria 2:</b> Evaluate moisture content in seed according to standard test method</p> <p><b>Performance Criteria 3:</b> Record results according to SOPs</p>

## Assessors Judgment Guide

Candidate Details	Name: ..... Registration/Roll Number: ..... Candidate Signature:.....
Assessment Outcome	COMPETENT <input type="checkbox"/> NOT YET COMPETENT <input type="checkbox"/> Name of the Assessor: ..... Assessor's code: ..... Signature of the Assessor: .....

Assessment Summary (to be filled by the assessor)							
Activity	Method					Result	
Nature of Activity	Written	Oral	Observation	Portfolio	Role Play	Competent	Not Yet Competent
Practical Skill Demonstration			✓				
Knowledge Assessment	✓	✓					
Other Requirement							

## Observation Checklist

Each Assessment Task (with performance criteria)				
<b>Assessment Task 1</b>	<b>Description of Assessment Task 1</b> Collect sample for seed testing assign by assessor.			
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1.	Collect sample for testing			
2.	Prepare sample according to required quality test			
3.	Follow health and safety guidelines			
4.	Maintain records			

Competent <input type="checkbox"/>	Not Yet Competent <input type="checkbox"/>
------------------------------------	--------------------------------------------

<b>Assessment Task 2</b>	<b>Description of Assessment Task 2</b> Perform <ul style="list-style-type: none"> <li>✓ Warm Germination</li> <li>✓ Sand Germination</li> <li>✓ Tetrazolium (TZ) test</li> <li>✓ Soak test</li> <li>✓ Blotter paper test</li> <li>✓ Agar plate test</li> </ul> as per instruction given by assessor.			
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1.	Arrange tools and equipment			
2.	Perform warm germination test			
3.	Perform sand germination test			
4.	Perform Tetrazolium (TZ) test			
5.	Perform Soak test			
6.	Perform blotter paper test			
7.	Perform agar plate test			
8.	Record results			
9.	Prepare reports			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

<b>Assessment Task 3</b>		<b>Description of Assessment Task 3</b> ✓ perform ELISA Assay ✓ prepare test reports As per instruction given by assessor.		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1.	Prepare for work			
2.	Perform ELISA			
3.	Perpare reports			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

<b>Assessment Task 4</b>		<b>Description of Assessment Task 4</b> Perform vigor test ✓ Conductivity test ✓ Paper piercing test ✓ Hiltner test ✓ Cold test ✓ Accelerated Aging test As per instruction given by assessor.		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1.	Arrange tools and equipment			
2.	Test seed vigour according to method			
3.	Record results			
4.	Prepare report			
5.	Maintain records			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

<b>Assessment Task 5</b>	<b>Description of Assessment Task 5</b> Perform moisture determination test <ul style="list-style-type: none"> <li>✓ Desiccation test</li> <li>✓ Oven drying method</li> <li>✓ Karl Fishers method</li> <li>✓ Distillation method</li> </ul> As per instruction given by assessor.
--------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1.	Arrange tools and equipment			
2.	Evaluate moisture content in seed according to standard test method			
3.	Record results according to SOPs			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		



## Knowledge Assessment

<b>Title of Qualification:</b> National Vocational Diploma Level 5 in Seed Processing and Biotechnology (Seed Processing Plant Technician)	<b>CS Code:</b>	<b>Level:</b> 5	<b>Version:</b> 01
<b>Competency Standard Title:</b> Perform Seed Quality Test	<b>Assessment Date (DD/MM/YY):</b>  <b>Assessment Time:</b> 30 min		

<b>Guidance for Candidate</b>	<b>To complete your assessment for this Competency Standard, you need to answer the questions on the following pages successfully.</b>
-------------------------------	----------------------------------------------------------------------------------------------------------------------------------------

<b>candidate Details</b>	Name: ..... Registration/Roll Number: ..... Candidate Signature: .....
<b>Written Assessment Outcome</b>	COMPETENT <input type="checkbox"/> NOT YET COMPETENT <input type="checkbox"/> Name of the Assessor: ..... Assessor's code: ..... Signature of the Assessor: .....

<b>Questions</b> (Candidate confidently answered questions correctly and demonstrated understanding of the topics and their application)	
1. What is seed quality test?	
2. Explain seed germination test and enlist seed germination test methods?	
3. What is Pathogenicity test and name the stages of Pathogenicity?	

**Questions** (Candidate confidently answered questions correctly and demonstrated understanding of the topics and their application)

4. What is ELISA and describe its basic principle?

5. Explain seed vigor test and enlist methods of measuring seed vigor?

6. Differentiate between seed viability and seed vigor?

7. Explain moisture determination test and discuss the methods used for moisture determination?

## ANSWER KEY

Sr.	Answers
1.	The seed labs conduct test of seed for checking the purity, inert matters, germination and mixing of other crops etc.
2.	<p>Through this test, the ability of the seed to germinate and produce normal plants is measured. Test results are expressed as the %age of germination of normal seedlings</p> <p>A germination test determines the percentage of seeds that are alive in any seed lot and germination speed varies with variety to variety of different seed crops.</p> <ul style="list-style-type: none"> <li>• Warm germination test</li> <li>• Sand germination test</li> <li>• Tetrazolium (TZ) test</li> <li>• Soak test</li> <li>• Blotter paper test</li> <li>• Agar plate test</li> </ul>
3.	<p>The Pathogenicity test is the main criterion for the identification of bacteria suspected of being the a etiological agents of plant disease</p> <ul style="list-style-type: none"> <li>• Exposure (contact)</li> <li>• Adhesion (colonization)</li> <li>• Invasion</li> <li>• Infection</li> </ul>
4.	<p>The enzyme-linked immunosorbent assay is a commonly used analytical biochemistry assay. The assay uses solid-phase type of enzyme immunoassay to detect the presence of a liquid in a sample using antibodies directed against the protein to be measured</p> <p>ELISA works on the principle that specific antibodies bind the target antigen and detects the presence and quantity of antigens binding.</p>
5.	<p>A vigour test predicts a seed lot's potential to perform well, vigorously during germination and emergence. A vigorous seed grows at a faster rate than poor vigour seeds even under favourable environments.</p> <ul style="list-style-type: none"> <li>• Conductivity Test</li> <li>• Hiltner Test (Brick gravel test)</li> <li>• Paper Piercing Test</li> <li>• Cold Test</li> <li>• Accelerated Ageing Test</li> </ul>
6.	Seed viability is the capability of germination of seed and producing normal seedling while vigour is the speed of germination. It is the highest time for physiological maturity
7.	<p>This test is carried out in order to determine the safe limit of the moisture %age in the seed before bagging and storage. Moisture determination is a widely used fundamental analytical operation, which satisfies the technological, analytical, commercial, and regulatory necessities in the processing, testing, and storage of food products.</p> <ul style="list-style-type: none"> <li>• Desiccation test</li> <li>• Oven drying method (Loss on drying method)</li> <li>• Karl Fishers method</li> <li>• Distillation method</li> </ul>

**Assessment Evidence  
Guide  
For  
“Seed Processing Plant  
Technician”  
Level-5**

**Perform Seed Packaging and Storage  
(Formative Assessment)**



**National Vocational & Technical  
Training Commission**

## Instruction Sheet for the Candidate

<b>Title of Qualification:</b> National Vocational Diploma Level 5 in Seed Processing & Biotechnology (Seed Processing Plant Technician)	<b>CS Code:</b>	<b>Level:5</b>	<b>Version:01</b>
<b>Competency Standard Title:</b> Perform Seed Packaging and Storage	<b>Assessment Date (DD/MM/YY):</b>  <b>Assessment Time:</b>		

Candidate Details	Name: .....  Registration/Roll Number:.....
Guidance for Candidate	<p><b>To meet this standard, you are required to complete the following within the given time frame (for practical demonstration &amp; assessment):</b></p> <p><b>Assessment Task 1:</b> Candidate is required to perform seed packaging operations as per instruction given by assessor.</p> <p><b>Assessment Task 2:</b> Candidate is required to perform labeling as per instruction given by assessor.</p> <p><b>Assessment Task 3:</b> Candidate is required to perform storage operation as per instruction given by assessor.</p> <p><b>Assessment Task 4:</b> Candidate is required to perform pest control measures as per instruction given by assessor.</p> <p><b>Assessment Task 5:</b> Candidate is required to maintain microclimatic conditions as per instruction given by assessor.</p> <p><b>And complete:</b></p> <ol style="list-style-type: none"> <li>1. Knowledge assessment test (Written or Oral)</li> <li>2. Portfolios at the time of assessment (if any)</li> </ol>
Minimum Evidence Required	<p>During a practical assessment, under observation by an assessor, you will complete:</p> <p><b>Assessment Task 1</b></p> <p><b>Performance Criteria 1:</b> Arrange tools and equipment/machinery for packaging</p> <p><b>Performance Criteria 2:</b> Perform pre-checks for packing machines</p> <p><b>Performance Criteria 3:</b> Arrange packaging material according to work instructions</p> <p><b>Performance Criteria 4:</b> Arrange processed seed for packaging</p> <p><b>Performance Criteria 5:</b> Collect quality test reports</p> <p><b>Performance Criteria 6:</b> Perform packaging operation according to work instructions</p> <p><b>Performance Criteria 7:</b> Follow safety standard checks for pre and post</p>

	<p>packaging.</p> <p><b>Performance Criteria 8: Maintain Records</b></p>
	<p><b>Assessment Task 2</b></p> <p><b>Performance Criteria 1:</b> Arrange material for labeling  <b>Performance Criteria 2:</b> Collect quality data reports  <b>Performance Criteria 3:</b> Prepare label according to work instructions  <b>Performance Criteria 4:</b> Execute labeling method  <b>Performance Criteria 5:</b> Maintain Records</p>
	<p><b>Assessment Task 3</b></p> <p><b>Performance Criteria 1:</b> Arrange materials required for storage  <b>Performance Criteria 2:</b> Execute storage operation according to standard requirements  <b>Performance Criteria 3:</b> Maintain records</p>
	<p><b>Assessment Task 4</b></p> <p><b>Performance Criteria 1:</b> Maintain microclimatic condition according to storage requirements  <b>Performance Criteria 2:</b> Perform periodic checks for contamination/spillage  <b>Performance Criteria 3:</b> Maintain records</p>
	<p><b>Assessment Task 5</b></p> <p><b>Performance Criteria 1:</b> Execute periodic pest control measure  <b>Performance Criteria 2:</b> Follow safety requirements</p>

# Assessors Judgment Guide

Candidate Details	Name: ..... Registration/Roll Number: ..... Candidate Signature: .....
Assessment Outcome	COMPETENT <input type="checkbox"/> NOT YET COMPETENT <input type="checkbox"/> Name of the Assessor:..... Assessor’s code:..... Signature of the Assessor: .....

<b>Assessment Summary (to be filled by the assessor)</b>							
<b>Activity</b>	<b>Method</b>					<b>Result</b>	
Nature of Activity	Written	Oral	Observati on	Portfolio	Role Play	Competen t	Not Yet Competen t
Practical Skill Demonstration			✓				
Knowledge Assessment	✓	✓					
Other Requirement							

## Observation Checklist

<b>Assessment Task 1</b>	<b>Description of Assessment Task 1</b> perform seed packaging operations as per instruction given by assessor.		
During the practical assessment, candidate demonstrated the following:	Yes	No	Remarks
1. Arrange tools and equipment/machinery for packaging			
2. Perform pre-checks for packing machines			
3. Arrange packaging material according to work instructions			
4. Arrange processed seed for packaging			
5. Collect quality test reports			
6. Perform packaging operation according to work instructions			
7. Follow safety standard checks for pre and post packaging.			
8. Maintain Records			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>	
Each Assessment Task (with performance criteria)			

<b>Assessment Task 2</b>	<b>Description of Assessment Task2</b> Perform labeling as per instruction given by assessor.		
During the practical assessment, candidate demonstrated the following:	Yes	No	Remarks
1. Arrange material for labeling			
2. Collect quality data reports			
3. Prepare label according to work instructions			
4. Execute labeling method			
5. Maintain Records			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>	



<b>Assessment Task 3</b>		<b>Description of Assessment Task3</b> Perform storage operation as per instruction given by assessor.		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1.	Arrange materials required for storage			
2.	Execute storage operation according to standard requirements			
3.	Maintain records			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

<b>Assessment Task 4</b>		<b>Description of Assessment Task4</b> Perform pest control measures as per instruction given by assessor.		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1.	Maintain microclimatic condition according to storage requirements			
2.	Perform periodic checks for contamination / spillage			
3.	Maintain records			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

<b>Assessment Task 5</b>		<b>Description of Assessment Task5</b> Maintain microclimatic conditions as per instruction given by assessor.		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1.	Execute periodic pest control measure			
2.	Follow safety requirements			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

## Knowledge Assessment

<b>Title of Qualification:</b> National Vocational Diploma Level 5 in Seed Processing & Biotechnology (Seed Processing Plant Technician)	<b>CS Code:</b>	<b>Level:</b> 5	<b>Version:</b> 01
<b>Competency Standard Title:</b> Perform Seed Packaging and Storage	<b>Assessment Date (DD/MM/YY):</b>  <b>Assessment Time:</b> 30 min		

Guidance for Candidate	<b>To complete your assessment for this Competency Standard, you need to answer the questions on the following pages successfully.</b>
------------------------	----------------------------------------------------------------------------------------------------------------------------------------

Candidate Details	Name: ..... Registration/Roll Number: Candidate Signature: .....
Written Assessment Outcome	COMPETENT <input type="checkbox"/> NOT YET COMPETENT <input type="checkbox"/> Name of the Assessor: ..... Assessor's code: Signature of the Assessor: .....

<b>Questions</b> (Candidate confidently answered questions correctly and demonstrated understanding of the topics and their application)	
1. What is packaging and enlist different packaging types?	
2. What are the benefits of packaging?	
3. Explain labeling and discuss its types?	
4. Differentiate between brand label and grade label?	
5. Explain storage mechanism?	

## ANSWER KEY

<b>Sr.</b>	<b>Answers</b>
1.	Packaging means the wrapping or bottling of products to make them safe from damages during transportation and storage. It keeps a product safe and marketable and helps in identifying, describing, and promoting the product Some of the common packaging types include boxes, cartons, cans, bottles, bags, envelopes, wrappers, and containers.
2.	<ul style="list-style-type: none"><li>• Packaging protects the products</li><li>• Packaging keeps the product from going bad</li><li>• Packaging provides hygiene</li><li>• Packaging is the preventive measure</li></ul>
3.	Labeling is describing someone or something in a word or short phrase. <ul style="list-style-type: none"><li>• Brand label</li><li>• Grade label</li><li>• Descriptive label</li><li>• Informative label</li><li>• Identification label</li><li>• Consumer protection</li><li>• Compliance with law</li></ul>
4.	Brand label is a label that contains information about the brand to which a product belongs while a <u>grade label</u> denotes the quality or grade level of a product.
5.	Storage is an important marketing function which involves holding and preserving goods. Storage enables a concern to achieve the economies of large-scale production, large scale buying and selling etc.

# **Assessment Evidence Guide**

**For**

## **“Seed Processing Plant Technician”**

**Level-5**

**Maintain Inventory for Seed Processing**

**(Formative Assessment)**



**National Vocational & Technical  
Training Commission**

## Instruction Sheet for the Candidate

<b>Title of Qualification:</b> National Vocational Diploma Level 5 in Seed Processing and Biotechnology (Seed Processing Plant Technician)	<b>CS Code:</b>	<b>Level:</b> 5	<b>Version:</b> 01
<b>Competency Standard Title:</b> Maintain Inventory for Seed Processing	<b>Assessment Date (DD/MM/YY):</b>  <b>Assessment Time :</b>		

Candidate Details	Name: .....  Registration/Roll Number:.....
Guidance for Candidate	<p><b>To meet this standard, you are required to complete the following within the given time frame (for practical demonstration &amp; assessment):</b></p> <p><b>Assessment Task 1:</b> Candidate is required to maintain inventory register as per instruction given by assessor</p> <p><b>Assessment Task 2:</b> Candidate is required to maintain record includes:</p> <ul style="list-style-type: none"> <li>✓ Initial moisture of raw seed</li> <li>✓ Record of dried lots</li> <li>✓ Final moisture level of the dried lots</li> <li>✓ Quantity of raw seed processed.</li> <li>✓ Quality of processed seed obtained.</li> </ul> <p>as per instruction given by assessor</p> <p><b>Assessment Task 3:</b> Candidate is required to maintain register of the processing machines and seed treatment as per instruction given by assessor</p> <p><b>And complete:</b></p> <ol style="list-style-type: none"> <li>1. Knowledge assessment test (Written or Oral)</li> <li>2. Portfolios at the time of assessment (if any)</li> </ol>
Minimum Evidence Required	<p><b>During a practical assessment, under observation by an assessor, you will complete:</b></p> <p><b>Assessment Task 1</b></p> <p><b>Performance Criteria 1:</b> Maintain stock register of seed lot as per standard format.</p> <p><b>Performance Criteria 2:</b> Maintain cash book on prescribed format.</p> <p><b>Performance Criteria 3:</b> Maintain fixed assets register as per prescribed format.</p> <p><b>Performance Criteria 4:</b> Maintain raw and processed seed registers according to standard format.</p>

<p>Minimum Evidence Required</p>	<p><b>Assessment Task 2</b>  <b>Performance Criteria 1:</b> Maintain seed register.  <b>Performance Criteria 2:</b> Check quantity of raw seed received from field.  <b>Performance Criteria 3:</b> Maintain record of the following.</p> <ul style="list-style-type: none"> <li>✓ Initial moisture of raw seed</li> <li>✓ Record of dried lots</li> <li>✓ Final moisture level of the dried lots</li> <li>✓ Quantity of raw seed processed.</li> <li>✓ Quality of processed seed obtained.</li> </ul>
	<p><b>Assessment Task 3</b>  <b>Performance Criteria 1:</b> Maintain register mentioning the time of starting and closing of the processing machines.  <b>Performance Criteria 2:</b> Maintain register of seed treatments.</p>

## Assessors Judgment Guide

(to be completed by the Assessor and signed both by the assessor and the candidate after the assessment)

<b>Candidate Details</b>	Name: ..... Registration/Roll Number: ..... Candidate Signature: .....
<b>Assessment Outcome</b>	COMPETENT <input type="checkbox"/> <span style="margin-left: 200px;">NOT YET COMPETENT <input type="checkbox"/></span> Name of the Assessor: ..... Assessor's code: ..... Signature of the Assessor: .....

<b>Assessment Summary (to be filled by the assessor)</b>							
<b>Activity</b>	<b>Method</b>					<b>Result</b>	
Nature of Activity	Written	Oral	Observation	Portfolio	Role Play	Competent	Not Yet Competent
Practical Skill Demonstration			✓				
Knowledge Assessment	✓	✓					
Other Requirement							

## Observation Checklist

<b>Assessment Task 1</b>	<b>Description of Assessment Task 1</b> Maintain inventory register as per instruction given by assessor			
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1.	Maintain stock register of seed lot as per standard format.			
2.	Maintain cash book on prescribed format.			
3.	Maintain fixed assets register as per prescribed format.			
4.	Maintain raw and processed seed registers according to standard format.			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

<b>Assessment Task 2</b>	<b>Description of Assessment Task 2</b> Maintain record includes: <ul style="list-style-type: none"> <li>✓ Initial moisture of raw seed</li> <li>✓ Record of dried lots</li> <li>✓ Final moisture level of the dried lots</li> <li>✓ Quantity of raw seed processed.</li> <li>✓ Quality of processed seed obtained.</li> </ul> as per instruction given by assessor			
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1.	Maintain seed register.			
2.	Check quantity of raw seed received from field.			
3.	Maintain record of the following. <ul style="list-style-type: none"> <li>✓ Initial moisture of raw seed</li> <li>✓ Record of dried lots</li> <li>✓ Final moisture level of the dried lots</li> <li>✓ Quantity of raw seed processed.</li> <li>✓ Quality of processed seed obtained.</li> </ul>			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		



<b>Assessment Task 3</b>		<b>Description of Assessment Task 3</b> Maintain register of the processing machines and seed treatment as per instruction given by assessor		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1.	Maintain register mentioning the time of starting and closing of the processing machines.			
2.	Maintain register of seed treatments.			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

## Knowledge Assessment

<b>Title of Qualification:</b> National Vocational Diploma Level 5 in Seed Processing and Biotechnology (Seed Processing Plant Technician)	<b>CS Code:</b>	<b>Level:</b> 5	<b>Version:</b> 01
<b>Competency Standard Title:</b> Maintain Inventory for Seed Processing	<b>Assessment Date (DD/MM/YY):</b>  <b>Assessment Time:</b> 30 min		

Guidance for Candidate	<b>To complete your assessment for this Competency Standard, you need to answer the questions on the following pages successfully.</b>
------------------------	----------------------------------------------------------------------------------------------------------------------------------------

Candidate Details	Name: ..... Registration/Roll Number: Candidate Signature: .....
Written Assessment Outcome	COMPETENT <input type="checkbox"/> NOT YET COMPETENT <input type="checkbox"/> Name of the Assessor:..... Assessor's code: Signature of the Assessor: .....

<b>Questions</b> (Candidate confidently answered questions correctly and demonstrated understanding of the topics and their application)	
1. Define inventory management and write down the components involved in inventory management?	
2. Why record keeping is important for inventory management?	
3. What are the major contents of daily performance report?	

## **ANSWER KEY**

<b>Sr.</b>	<b>Answers</b>
1.	Inventory management refers to the process of ordering, storing, using, and selling of stock products. The components involved in inventory management are, <ul style="list-style-type: none"><li>• Daily report</li><li>• summary</li><li>• Ledger</li><li>• Invoice</li><li>• Stock register</li><li>• Cashbook</li><li>• Logbook</li></ul>
2.	Accurate inventory record helps to ensure that you always have high-demand items on-hand, so that you never come up short. An accurate inventory record also allows you to follow sales trends so that you can differentiate between fast-moving and slow-moving products
3.	The major contents in daily performance report are, <ul style="list-style-type: none"><li>• Commodity name</li><li>• Title page.</li><li>• Table of contents.</li><li>• Executive summary.</li><li>• Discussion.</li><li>• Recommendations.</li><li>• References</li></ul>

**Assessment Evidence  
Guide  
For  
“Seed Processing Plant  
Technician”**

**Level-5**

**Prepare Plantlets by Tissue Culture Technique  
(Formative Assessment)**



**National Vocational & Technical  
Training Commission**

## Instruction Sheet for the Candidate

<b>Title of Qualification:</b> National Vocational Diploma Level 5 in Seed Processing and Biotechnology (Seed Processing Plant Technician)	<b>CS Code:</b>	<b>Level:</b> 5	<b>Version:</b> 01
<b>Competency Standard Title:</b> Prepare Plantlets by Tissue Culture Technique	<b>Assessment Date (DD/MM/YY):</b>  <b>Assessment Time :</b>		

Candidate Details	Name: .....  Registration/Roll Number:.....
Guidance for Candidate	<p><b>To meet this standard, you are required to complete the following within the given time frame (for practical demonstration &amp; assessment):</b></p> <p><b>Assessment Task 1:</b> Candidate is required to prepare stock solution and media as per instruction given by assessor.</p> <p><b>Assessment Task 2:</b> Candidate is required to perform sterilization, tissue culturing and acclimatization as per instruction given by assessor.</p> <p><b>And complete:</b></p> <ol style="list-style-type: none"> <li>3. Knowledge assessment test (Written or Oral)</li> <li>4. Portfolios at the time of assessment (if any)</li> </ol>
Minimum Evidence Required	<p><b>During a practical assessment, under observation by an assessor, you will complete:</b></p> <p><b>Assessment Task 1</b></p> <p><b>Performance Criteria 1:</b> Arrange the glassware &amp; chemicals</p> <p><b>Performance Criteria 2:</b> Prepare Macronutrient stock solution</p> <p><b>Performance Criteria 3:</b> Prepare Micronutrient stock solution</p> <p><b>Performance Criteria 4:</b> Prepare Vitamin stock solution</p> <p><b>Performance Criteria 5:</b> Prepare Hormones stock solution</p> <p><b>Performance Criteria 6:</b> Prepare plan for working</p> <p><b>Performance Criteria 7:</b> Mix the stocks as per plan</p> <p><b>Performance Criteria 8:</b> Prepare media according to SOPs</p> <p><b>Performance Criteria 9:</b> Maintain the record</p> <p><b>Performance Criteria 10:</b> Follow health and safety guidelines</p>

<p>Minimum Evidence Required</p>	<p><b>Assessment Task 2</b></p> <p><b>Performance Criteria 1:</b> Arrange tools and equipment</p> <p><b>Performance Criteria 2:</b> Perform sterilization of glassware's</p> <p><b>Performance Criteria 3:</b> Perform sterilization of plastic wares</p> <p><b>Performance Criteria 4:</b> Perform sterilization of tools and equipment</p> <p><b>Performance Criteria 5:</b> Perform sterilization of stock solution</p> <p><b>Performance Criteria 6:</b> Perform sterilization of media</p> <p><b>Performance Criteria 7:</b> Prepare explants for inoculation</p> <p><b>Performance Criteria 8:</b> Perform Inoculation and establish primary cultures</p> <p><b>Performance Criteria 9:</b> Perform sub cultures for shoot multiplication</p> <p><b>Performance Criteria 10:</b> Arrange acclimatize materials</p> <p><b>Performance Criteria 11:</b> Prepare plantlets for acclimatization</p> <p><b>Performance Criteria 12:</b> Perform acclimatization and hardening of plantlets according to SOP</p> <p><b>Performance Criteria 13:</b> Follow health and safety guidelines</p>
----------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------



## Observation Checklist

Assessment Task 1		Description of Assessment Task 1 Prepare stock solution and media as per instruction given by assessor.		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1.	Arrange the glassware & chemicals			
2.	Prepare Macronutrient stock solution			
3.	Prepare Micronutrient stock solution			
4.	Prepare Vitamin stock solution			
5.	Prepare Hormones stock solution			
6.	Prepare plan for working			
7.	Mix the stocks as per plan			
8.	Prepare media according to SOPs			
9.	Maintain the record			
10.	Follow health and safety guidelines			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		



<b>Assessment Task 2</b>		<b>Description of Assessment Task 2</b> Perform Sterilization, tissue culturing and acclimatization as per instruction given by assessor.		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1.	Arrange tools and equipment			
2.	Perform sterilization of glassware's			
3.	Perform sterilization of plastic wares			
4.	Perform sterilization of tools and equipment			
5.	Perform sterilization of stock solution			
6.	Perform sterilization of media			
7.	Prepare explants for inoculation			
8.	Perform Inoculation and establish primary cultures			
9.	Perform sub cultures for shoot multiplication			
10.	arrange acclimatize materials			
11.	Prepare plantlets for acclimatization			
12.	Perform acclimatization and hardening of plantlets according to SOP			
13.	Follow health and safety guidelines			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

## Knowledge Assessment

<b>Title of Qualification:</b> National Vocational Diploma Level 5 in Seed Processing and Biotechnology (Seed Processing Plant Technician)	<b>CS Code:</b>	<b>Level:</b> 5	<b>Version:</b> 01
<b>Competency Standard Title:</b> Prepare Plantlets by Tissue Culture Technique	<b>Assessment Date (DD/MM/YY):</b>  <b>Assessment Time:</b> 30 min		

Guidance for Candidate	<b>To complete your assessment for this Competency Standard, you need to answer the questions on the following pages successfully.</b>
------------------------	----------------------------------------------------------------------------------------------------------------------------------------

Candidate Details	Name: ..... Registration/Roll Number: Candidate Signature: .....
Written Assessment Outcome	COMPETENT <input type="checkbox"/> NOT YET COMPETENT <input type="checkbox"/> Name of the Assessor:..... Assessor's code: Signature of the Assessor: .....

<b>Questions</b> (Candidate confidently answered questions correctly and demonstrated understanding of the topics and their application)	
1. Explain stock solution?	
2. Describe nutrient solution?	
3. Explain tissue culture media and its components?	
4. Define sterilization and enlist sterilization solution for tissue culturing?	

<b>Questions</b> (Candidate confidently answered questions correctly and demonstrated understanding of the topics and their application)	
5. Explain tissue culturing and enlist material required for tissue culture?	
6. Differentiate between hardening and acclimatization	

## ANSWER KEY

<b>Sr.</b>	<b>Answers</b>
1.	A concentrated solution that usually is diluted with water before use in photography. Stock solutions are used to save preparation time, conserve materials, reduce storage space, and improve the accuracy with which working lower concentration solutions are prepared
2.	Nutrient solution is a mix of concentrated mineral that plants need to grow. Nutrient solution mixed with water and given to the plants as per their requirements. These solutions consist of macro and micro nutrients solution.
3.	The media in which growth of tissues or cells occur in an artificial medium separate from the parent organism. This technique is also called micropropagation Plant tissue culture media generally contains macronutrients, micronutrients, vitamins, amino acids or nitrogen supplements, source of carbon, growth regulators and solidifying agents.
4.	The process of making something free from bacteria or other living microorganisms. The sterilization solution for tissue culturing are, <ul style="list-style-type: none"><li>• Vitamins solution</li><li>• Nutrients solution</li><li>• Hormones solutions</li></ul>
5.	Tissue culture, a method of biological research in which fragments of tissue from plants are transferred to an artificial environment in which they can continue to survive and function. The cultured tissue may consist of a single cell, a population of cells, or a whole or part of an organ. Material required for tissue culturing includes, <ul style="list-style-type: none"><li>• Autoclave</li><li>• Plant Growth Chamber</li><li>• Laminar Air Flow Bench</li><li>• Microscopy</li><li>• Colorimeter</li><li>• Centrifugation</li><li>• Chromatography</li></ul>
6.	Gradual exposing off of plantlets to outer environment is called hardening while the process in which plantlets adjust to change in their environment.

**Assessment Evidence  
Guide  
For  
“Seed Processing Plant  
Technician”  
Level-5  
Manage and Supervise the Job Activities  
(Formative Assessment)**



**National Vocational & Technical  
Training Commission**

## Instruction Sheet for the Candidate

<b>Title of Qualification:</b> National Vocational Diploma Level 5 in Seed Processing and Biotechnology (Seed Processing Plant Technician)	<b>CS Code:</b>	<b>Level:</b> 5	<b>Version:</b> 01
<b>Competency Standard Title:</b> Manage & Supervise the Job Activities	<b>Assessment Date (DD/MM/YY):</b>  <b>Assessment Time:</b>		

Candidate Details	Name: .....  Registration/Roll Number:.....
Guidance for Candidate	<p><b>To meet this standard, you are required to complete the following within the given time frame (for practical demonstration &amp; assessment):</b></p> <p style="margin-left: 40px;"><b>Assessment Task 1:</b> Candidate is required to design supervision program for seed processing plant activities as per instructions given by assessor.</p> <p style="margin-left: 40px;"><b>Assessment Task 2:</b> Candidate is required to conduct inspection of seed processing plant and develop inspection report as per instructions given by assessor.</p> <p><b>And complete:</b></p> <ol style="list-style-type: none"> <li><b>5. Knowledge assessment test (Written or Oral)</b></li> <li><b>6. Portfolios at the time of assessment (if any)</b></li> </ol>

<p>Minimum Evidence Required</p>	<p><b>During a practical assessment, under observation by an assessor, you will complete:</b></p> <p><b>Assessment Task 1</b></p> <p><b>Performance Criteria 1:</b> Consult with the client to obtain required information</p> <p><b>Performance Criteria 2:</b> Prepare SOPs in accordance with the identified requirements.</p> <p><b>Performance Criteria 3:</b> Prepare the process flow diagram in order to achieve Quality outcome.</p> <p><b>Performance Criteria 4:</b> Break down work of activities into small achievable components and efficient sequences</p> <p><b>Performance Criteria 5:</b> Recognize site hazards and the personal protective equipment (PPE) and safety procedures specified for job</p> <p><b>Performance Criteria 6:</b> Organize site induction for support personnel as required</p> <p><b>Performance Criteria 7:</b> Plan housekeeping activities prior to and post completion of work</p> <p><b>Performance Criteria 8:</b> List and arrange required resources prior to commencement of work</p> <p><b>Performance Criteria 9:</b> Recognize the areas of work which could result in a delay of work, wastage of material or damage to tools.</p> <p><b>Performance Criteria 10:</b> Allocate appropriate responsibility to appropriate team member to avoid conflicts.</p> <p><b>Performance Criteria 11:</b> Review work plan in response to new information, urgent requests, changed situations or instructions from appropriate personnel</p> <p><b>Performance Criteria 12:</b> Cooperate with team members to negotiate and achieve agreed outcomes, timelines and priorities</p>
----------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

<p>Minimum Evidence Required</p>	<p><b>Assessment Task 2</b></p> <p><b>Performance Criteria 1:</b> Conduct inspection of processes &amp; materials in accordance with the inspection plan</p> <p><b>Performance Criteria 2:</b> Identify the defects and deficiencies in product &amp; processes and record with evidence</p> <p><b>Performance Criteria 3:</b> Perform test as per standard procedure for determining the physical properties of materials and product.</p> <p><b>Performance Criteria 4:</b> Collect the samples of materials &amp; products for lab testing as per standards</p> <p><b>Performance Criteria 5:</b> Pack and seal the sample &amp; sub-samples in the presence of witnesses as per standards</p> <p><b>Performance Criteria 6:</b> Complete the sampling document as per requirement</p> <p><b>Performance Criteria 7:</b> Check the actions taken for rectification of snag list.</p> <p><b>Performance Criteria 8:</b> Record the non-compliance and expected breaches of contract as per SOPs.</p> <p><b>Performance Criteria 9:</b> Collect and review the information relevant to inspection activities for recoding inspection results</p> <p><b>Performance Criteria 10:</b> Verify the integrity of information supplied by other party as a part of the inspection process.</p> <p><b>Performance Criteria 11:</b> Write the inspection observations and findings</p> <p><b>Performance Criteria 12:</b> Suggest the necessary corrective actions for tackling the identified problems.</p>
----------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------



## Assessors Judgment Guide

(to be completed by the Assessor and signed both by the assessor and the candidate after the assessment)

Candidate Details	Name: ..... Registration/Roll Number: ..... Candidate Signature: .....
Assessment Outcome	COMPETENT <input type="checkbox"/> <span style="margin-left: 200px;">NOT YET COMPETENT <input type="checkbox"/></span> Name of the Assessor:..... Assessor's code:..... Signature of the Assessor: .....

Assessment Summary (to be filled by the assessor)							
Activity	Method					Result	
	Written	Oral	Observation	Portfolio	Role Play	Competent	Not Yet Competent
Practical Skill Demonstration			✓				
Knowledge Assessment	✓	✓					
Other Requirement							

## Observation Checklist

<b>Assessment Task 1</b>		<b>Description of Assessment Task 1</b> Design supervision program for seed processing plant activities as per instructions given by assessor.		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1.	Consult with the client to obtain required information			
2.	Prepare SOPs in accordance with the identified requirements.			
3.	Prepare the process flow diagram in order to achieve Quality outcome.			
4.	Break down work of activities into small achievable components and efficient sequences			
5.	Recognize site hazards and the personal protective equipment (PPE) and safety procedures specified for job			
6.	Organize site induction for support personnel as required			
7.	Plan housekeeping activities prior to and post completion of work			
8.	List and arrange required resources prior to commencement of work			
9.	Recognize the areas of work which could result in a delay of work, wastage of material or damage to tools.			
10.	Allocate appropriate responsibility to appropriate team member to avoid conflicts.			
11.	Review work plan in response to new information, urgent requests, changed situations or instructions from appropriate personnel			
12.	Cooperate with team members to negotiate and achieve agreed outcomes, timelines and priorities			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

<b>Assessment Task 2</b>		<b>Description of Assessment Task 2</b> Conduct inspection of seed processing plant and develop inspection report as per instructions given by assessor.		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1.	Conduct inspection of processes & materials in accordance with the inspection plan			
2.	Identify the defects and deficiencies in product & processes and record with evidence			
3.	Perform test as per standard procedure for determining the physical properties of materials and product.			
4.	Collect the samples of materials & products for lab testing as per standards			
5.	Pack and seal the sample & sub-samples in the presence of witnesses as per standards			
6.	Complete the sampling document as per requirement			
7.	Check the actions taken for rectification of snag list.			
8.	Record the non-compliance and expected breaches of contract as per SOPs.			
9.	Collect and review the information relevant to inspection activities for recoding inspection results			
10.	Verify the integrity of information supplied by other party as a part of the inspection process.			
11.	Write the inspection observations and findings			
12.	Suggest the necessary corrective actions for tackling the identified problems.			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

## Knowledge Assessment

<b>Title of Qualification:</b> National Vocational Diploma Level 5 in Seed Processing and Biotechnology (Seed Processing Plant Technician)	<b>CS Code:</b>	<b>Level:</b> 5	<b>Version:</b> 01
<b>Competency Standard Title:</b>	<b>Assessment Date (DD/MM/YY):</b>  <b>Assessment Time:</b> 30 min		

Guidance for Candidate	<b>To complete your assessment for this Competency Standard, you need to answer the questions on the following pages successfully.</b>
------------------------	----------------------------------------------------------------------------------------------------------------------------------------

Candidate Details	Name: ..... Registration/Roll Number:  Candidate Signature: .....
Written Assessment Outcome	COMPETENT <input type="checkbox"/> NOT YET COMPETENT <input type="checkbox"/>  Name of the Assessor:..... Assessor's code:  Signature of the Assessor: .....

<b>Questions</b> (Candidate confidently answered questions correctly and demonstrated understanding of the topics and their application)	
1. What is WBS?	
2. Define Critical Path.	
3. Define quality of work.	
4. Enlist the steps of site Inspection?	
5. Explain different types of defects for inspection activities?	
6. Define project management.	

## **ANSWER KEY**

<b>Sr.</b>	<b>Answers</b>
1.	Work Break Structure
2.	It is the longest path (i.e. path with the longest duration) from project start to finish.
3.	The value of work delivered by an individual, team or organization
4.	Planning, Overview meeting, Preparation, Inspection meeting, Rework and Follow-up
5.	Requirements, Incompleteness, Omitted/Missing, Incorrect, Ambiguous, Infeasible, Inconsistent, Over-specification etc.
6.	Project management is the use of specific knowledge, skills, tools and techniques to deliver something of value to people

**Assessment Evidence  
Guide  
For  
“Seed Processing Plant  
Technician”  
Level-5  
Develop Entrepreneurial Skills  
(Formative Assessment)**



**National Vocational & Technical  
Training Commission**

## Instruction Sheet for the Candidate

<b>Title of Qualification:</b> National Vocational Diploma Level 5 in Seed Processing and Biotechnology (Seed Processing Plant Technician)	<b>CS Code:</b>	<b>Level:</b> 5	<b>Version:</b> 01
<b>Competency Standard Title:</b> Develop Entrepreneurial Skills	<b>Assessment Date (DD/MM/YY):</b>  <b>Assessment Time:</b>		

Candidate Details	Name: .....  Registration/Roll Number:.....
Guidance for Candidate	<p><b>To meet this standard, you are required to complete the following within the given time frame (for practical demonstration &amp; assessment):</b></p> <p><b>Assessment Task 1:</b> Candidate is required to develop a business plan as per instructions given by assessor and collect information regarding funding sources as per business plan.</p> <p><b>Assessment Task 2:</b> Candidate is required to develop a marketing plan as per instructions given by assessor.</p> <p><b>And complete:</b></p> <ol style="list-style-type: none"> <li><b>3. Knowledge assessment test (Written or Oral)</b></li> <li><b>4. Portfolios at the time of assessment (if any)</b></li> </ol>

<p>Minimum Evidence Required</p>	<p><b>During a practical assessment, under observation by an assessor, you will complete:</b></p> <p><b>Assessment Task 1:</b></p> <p><b>Performance Criteria 1:</b> Conduct a market survey to collect following information</p> <ul style="list-style-type: none"> <li>o Customer /demand</li> <li>o Tools, equipment, machinery and furniture with rates</li> <li>o Raw material</li> <li>o Supplier</li> <li>o Credit / funding sources</li> <li>o Marketing strategy</li> <li>o Market trends</li> <li>o Overall expenses</li> <li>o Profit margin</li> </ul> <p><b>Performance Criteria 2:</b> Select the best option in terms of cost, service, quality, sales, profit margin, overall expenses</p> <p><b>Performance Criteria 3:</b> Compile the information collected through the market survey, in the business plan format</p> <p><b>Performance Criteria 4:</b> Identify the available funding sources based on their terms and conditions, maximum loan limit, payback time, interest rate</p> <p><b>Performance Criteria 5:</b> Choose the best available option according to investment requirement</p> <p><b>Performance Criteria 6:</b> Prepare documents according to the loan agreement requirement</p> <p><b>Performance Criteria 7:</b> Include the information of funding sources in the business plan</p>
	<p><b>Assessment Task 2:</b></p> <p><b>Performance Criteria 1:</b> Make a marketing plan for the business including product, price, placement, promotion, people, packaging and positioning</p> <p><b>Performance Criteria 2:</b> Include the information of marketing plan in the business plan</p> <p><b>Performance Criteria 3:</b> Communicate with internal customers e.g.labor, partners and external customers e.g.: suppliers, customers etc., using effective communication skills</p> <p><b>Performance Criteria 4:</b> Use different modes of communication to communicate internally and externally e.g.: presentation, speaking, writing, listening, visual representation, reading etc.</p> <p><b>Performance Criteria 5:</b> Use specific business terms used in the market</p>



## Assessors Judgment Guide

(To be completed by the Assessor and signed both by the assessor and the candidate after the assessment)

<b>Candidate Details</b>	Name: ..... Registration/Roll Number: ..... Candidate Signature: .....
<b>Assessment Outcome</b>	COMPETENT <input type="checkbox"/> NOT YET COMPETENT <input type="checkbox"/> Name of the Assessor:..... Assessor's code:..... Signature of the Assessor: .....

<b>Assessment Summary (to be filled by the assessor)</b>							
<b>Activity</b>	<b>Method</b>					<b>Result</b>	
Nature of Activity	Written	Oral	Observation	Portfolio	Role Play	Competent	Not Yet Competent
Practical Skill Demonstration			✓				
Knowledge Assessment	✓	✓					
Other Requirement							

## Observation Checklist

<b>Assessment Task 1</b>	<b>Description of Assessment Task 1</b> Develop a business plan as per instructions given by assessor and collect information regarding funding sources as per business plan.			
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1.	Conduct a market survey to collect following information <ul style="list-style-type: none"> <li>○ Customer /demand</li> <li>○ Tools, equipment, machinery and furniture with rates</li> <li>○ Raw material</li> <li>○ Supplier</li> <li>○ Credit / funding sources</li> <li>○ Marketing strategy</li> <li>○ Market trends</li> <li>○ Overall expenses</li> <li>○ Profit margin</li> </ul>			
2.	Select the best option in terms of cost, service, quality, sales, profit margin, overall expenses			
3.	Compile the information collected through the market survey, in the business plan format			
4.	Identify the available funding sources based on their terms and conditions, maximum loan limit, payback time, interest rate			
5.	Choose the best available option according to investment requirement			
6.	Prepare documents according to the loan agreement requirement			
7.	Include the information of funding sources in the business plan			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

<b>Assessment Task 2</b>		<b>Description of Assessment Task 2</b> Develop a marketing plan as per instructions given by assessor.		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1.	Make a marketing plan for the business including product, price, placement, promotion, people, packaging and positioning			
2.	Include the information of marketing plan in the business plan			
3.	Communicate with internal customers e.g.: labor, partners and external customers e.g.: suppliers, customers etc., using effective communication skills			
4.	Use different modes of communication to communicate internally and externally e.g.: presentation, speaking, writing, listening, visual representation, reading etc.			
5.	Use specific business terms used in the market			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

## Knowledge Assessment

<b>Title of Qualification:</b> National Vocational Diploma Level 5 in Seed Processing and Biotechnology (Seed Processing Plant Technician)	<b>CS Code:</b>	<b>Level:</b> 5	<b>Version:</b> 01
<b>Competency Standard Title:</b> Develop Entrepreneurial Skills	<b>Assessment Date (DD/MM/YY):</b>  <b>Assessment Time:</b> 30 min		

<b>Guidance for Candidate</b>	<b>To complete your assessment for this Competency Standard, you need to answer the questions on the following pages successfully.</b>
-------------------------------	----------------------------------------------------------------------------------------------------------------------------------------

<b>Candidate Details</b>	Name: ..... Registration/Roll Number: Candidate Signature: .....
<b>Written Assessment Outcome</b>	COMPETENT <input type="checkbox"/> NOT YET COMPETENT <input type="checkbox"/> Name of the Assessor:..... Assessor's code: Signature of the Assessor: .....

<b>Questions</b> (Candidate confidently answered questions correctly and demonstrated understanding of the topics and their application)	
1. What is business plan?	
2. What is marketing plan?	
3. What are 7 elements of a marketing plan?	
4. What are the types of marketing plans?	

## **ANSWER KEY**

<b>Sr.</b>	<b>Answers</b>
1.	A business plan is a document created by a company that describe the company's goals, operations, industry standing, marketing objectives and financial projections.
2.	A marketing plan is an operational document that shows how an organization is planning to use advertising and outreach to target a specific market.
3.	The 7P's of marketing include product, price, promotion, place, people, process and physical evidence.
4.	4 types of marketing plans and strategies. <ul style="list-style-type: none"><li>✓ Market penetration strategy</li><li>✓ Market development strategy</li><li>✓ Product development strategy</li><li>✓ Diversification strategy</li></ul>