

**Curriculum
For
Certificate in Fruit Preservation, Packaging and
Logistics
(06 Months Certificate Course)
Code:VA03S001
(2013)**

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Introduction

Fruit preservation, packaging and logistics is design to Reduce Post-harvest losses, Increase the shelf life of the fruits, Preserve fruits for when it is out of season, Increased food security, Add variety to diet, Generate increased income and Create employment opportunities. Compare to other technology small scale fruit preservation and packaging is suitable for women.

Competencies Gained After Completion of Course

- Use of tools, equipment and machinery.
- Knowledge of types and variety of fruits.
- Knowledge and skills of procedures of harvesting of fruits.
- Knowledge of different packaging and preservative materials.
- Skills involve in Grading of fruits.
- Skills of cleaning procedures.
- Skills for application of preservatives.
- Skills of quality control tests.
- Skills of quarantine/pathogen tests.
- Skills of labeling and packaging.
- Knowledge and skills of inventory management.
- Knowledge and skills of logistics and shipment.
- Knowledge of communication skills.
- Knowledge of occupational health & safety precautions.

Job Opportunities Available Immediately and In The Future

Sales & marketing supervisor, export assistant, logistics supervisor, packaging, supervisor, store supervisor in fruit preservation, packaging and logistic business.

Trainee entry level: Middle preferably Matric

Minimum qualification of trainer: DAE (Food Technology) with 2 yeas relevant field experience or BS Food Technology.

Medium of Instruction: Urdu or English

Sequence of the modules: Arrange Materials -Perform Characterization of Fruits- Preserve Fruits-Perform Packaging of Fruits-Perform Communication-Arrange Logistic for Finished Products -Upgrade Skills

Timeframe of assessment: 4 weeks

Overview about the program –Curriculum for (Fruit Preservation, Packaging & Logistics)

Module Title and Aim	Learning Units	Theory¹ Days/hours	Workplace² Days/hours	Timeframe of modules
Module 1 Arrange materials	LU1- Select type of fruits LU2- Harvest fruits LU3- Procure fruits from market LU4- Stock raw fruits in stores LU5- Arrange packaging material LU6- Arrange preservatives	10 hours 10 hours 4 hours 10 hours 5 hours 5 hours	25 hours 25 hours 20 hours 20 hours 25 hours 25 hours	Independent 184 hours
Module 2 Perform characterization of fruits	LU1- Perform grading on the basis of variety LU2- Perform grading on the basis of size LU3- perform grading on the basis of behavior	4 hours 4 hours 4 hours	30 hours 30 hours 30 hours	Complete 1 st module 102 hours
Module 3 Preserves fruits	LU1- perform cleaning of fruits LU2- Select preservatives LU3- Apply preservatives LU4- Perform polishing LU5- Perform quality tests LU6- Perform quarantine tests LU7- apply OHS precautions	10 hours 5 hours 4 hours 4 hours 5 hours 5 hours 3 hours	30 hours 10 hours 40 hours 30 hours 30 hours 30 hours 15 hours	Independent 221 hours

¹ Learning hours in training provider premises

² Training workshop, laboratory and on-the-job workplace

Module Title and Aim	Learning Units	Theory³ Days/hours	Workplace⁴ Days/hours	Timeframe of modules
Module 5 Arrange logistics for finished products	LU1- Maintain inventory of finished products LU2- Arrange storage LU3- Arrange logistics LU4- Arrange shipment LU5- Ensure safe and secure logistics	4 hours 4 hours 4 hours 4 hours 4 hours	20 hours 10 hours 10 hours 8 hours 8 hours	Complete 6 th module 76 hours
Module 6 Perform communication	LU1- Communicate with store manager LU2- Communicate with labor LU3-communicate with suppliers/vendors LU4- Communicate with supervisor LU5- Communicate with colleagues/peers LU6- Communicate with external stake holders	6 hours 6 hours 6 hours 6 hours 6 hours 6 hours		Independent 36 hours
Module 7 Upgrade skills	LU1- Attend training programs LU2- Consult seniors LU3- Attend workshops and seminar LU4- Read books and manuals LU5- Use internet	- - - 4 hours 2 hours	20 hours 10 hours 10 hours 10 hours 10 hours	Independent 66 hours

³ Learning hours in training provider premises

⁴ Training workshop, laboratory and on-the-job workplace

Curriculum Contents (Teaching and Learning Guide)

Module1:Arrange materials

Objective of the Module:To make trainee concious and competent while starting or going to be the part of fruit preservation,packaging,and logistic business.

Duration: 184 hours Theory:44 hours Practice:140 hours

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
1. Select types of fruits	To choose the fruit as per customer requirement.	Knowledge of: -seasonal fruits -Conditions require for optimum growth -all steps followed by the selection Ability to: -select cultivar -bring together all necessary resources - Keenly implement all safety and quality parameters related to selection of fruits.	Th: 10 Prac: 25	-Stationary items -Fruits	-Fruit markets -Quality labs -Class room
2.Harvest fruits	To perform harvesting techniques for minimizing losses	Knowledge of: -Pre/post harvesting requirement -harvesting methods -appropriate harvesting time Ability to: -apply sound production practices -apply proper techniques/ tools for handling during harvesting -handle and store fruits appropriately	Th: 10 Prac: 25	-Stationary -Harvesting Tools -Buckets -Gloves -Hair Net -Long Shoes -Mask	-Field -quality labs - class room
3.Procure fruits from market	To procure quality products.	Knowledge of: -wholesale markets/ fruit farms and prices situated nearby. -quality of fruit required Ability to: -conduct market/fruit farms survey -select quality products. -deliver measureable achievement	Th: 4 Prac: 20	Stationary	-Market -class room
Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
4.Stock raw	To apply	Knowledge of:	Th: 10	-Stationary	-Storage place

fruits in store	standard stocking procedures in order to avoid destruction of quality.	-standard stocking procedures -Storage requirement of fruits Ability to: -identify items need more air -place fruits to avoid cross contamination -keep out of temperature danger zone -store in order to retain natural aroma. -FIFO Practices	Prac: 20	-Stocking Racks -Pallets -Trolley	-class room
5.Arrange packaging material	To select the packaging material for safe delivery of goods.	Knowledge of: -suitable packaging materials -categories of fruits to be packed -shelf life of fruits required -Environmental factors Ability to: -check the quality of packaging material -minimize the packaging cost.	Th: 5 Prac: 25	-Stationary -Packaging material	-Market -Class room
6.Arrange preservatives	To choose safe preservatives in order to not produce any unhealthy effects.	Knowledge of: -Preservative -Permitted preservatives -Allowable limits -Storage conditions for preservatives Ability to: -Read the labels on preservatives -decode the E numbers -handle keeping safety on top.	Th: 5 Prac: 25	-Stationary -Refrigerator -Glass wear	-Market -Lab -Classroom

Module2:Perform characterization of fruits

Objective of the Module: To make trainee understand and apply skills to choose best input for best output produce.

Duration: 102 hours Theory:12hours Practice: 90 hours

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
1.perform grading on the basis of variety	To apply the grading techniques based on grading scales in order to produce quality product.	<p>Knowledge of:</p> <ul style="list-style-type: none"> -varieties of fruits -grading standard procedures -grading scales -Tools/ Equipment use for grading <p>Ability to:</p> <ul style="list-style-type: none"> -Apply tools/equipments -apply standard procedures for grading - identify mature and immature fruits -remove under ripe, over ripe, damaged and misshapen fruits on the basis of verity 	Th: 4 Prac: 30	<ul style="list-style-type: none"> -Stationary -Fruit buckets -Trays -Tools & Equipment for Grading 	<ul style="list-style-type: none"> -Working area -Class room
2.Perform grading on the basis of size	To apply the grading techniques based on grading scales in order to produce quality product.	<p>Knowledge of:</p> <ul style="list-style-type: none"> -grading standard procedures -grading scales on the basis of size <p>Ability to:</p> <ul style="list-style-type: none"> -apply standard procedures for grading - identify mature and immature fruits -remove under ripe, over ripe, damaged and misshapen fruits on the bases of size 	Th: 4 Prac: 30	<ul style="list-style-type: none"> -Stationary -Fruit buckets -Trays -Tools & Equipment for Grading 	<ul style="list-style-type: none"> -Working area -Class room

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
3.Perform grading on the basis of behavior	To apply the grading techniques based on grading scales in order to produce quality product.	Knowledge of: -categories of fruits -temperature and humidity limits Ability to: -perform test for basic constitutional information -precede mature and immature fruits separately.	Th: 4 Prac: 30	-Stationary -Fruit buckets -Trays -Tools & Equipment for Grading -Lab glass wear -Chemicals	-Working area -Class room -Lab

Module3:Preserves Fruits

Objective of the Module: To familiarize trainee how to focus all the quality related issues which reduce the fruit shelf life.

Duration: 211 hours Theory:36 hours Practice:175 hours

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
1.Perform cleaning of fruits	To apply sound cleaning techniques and chemicals resulting in contamination free product.	Knowledge of: -cleaning methods -allow cleaning chemicals and their limits Ability to: -prepare cleaning solutions. -ensure safe cleaning -check if any residue of detergent remains on the fruit.	Th: 4 Prac: 30	-Stationary -Fruits -Cleaning detergents -Cleaning material -Washing tanks	-Working area -class room
2.Select preservatives	To identify and select allowed preservatives according to destination in order to avoid any rejected consignment.	Knowledge of: -allowed preservatives and their quantity as per destination. -fruit chemistry Ability to: -Analyze fruit according to its chemistry -Select preservative according to fruit	Th: 5 Prac: 10	-Stationary -Preservative -Fruits	-Lab
3.Apply preservatives	To apply preservatives keeping all safety precautions on priority.	Knowledge of: -techniques to apply preservatives standard concentration -handling of preservatives -safety precautions	Th: 4 Prac: 40	-Stationary -Glass wear -Preservative	-Working area -Class room

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
		Ability to: -prepare and set quantity of preservatives. -perform addition of preservatives. -avoid human error.			
4.Perform polishing	To apply polishing with an understanding of risk factors	Knowledge of: -polishing techniques -polishing materials Ability to: -select polishing material -set coating quantity -control risk factors.	Th: 4 Prac: 30	-Stationary -Polishing tools & equipment -Polishing Material	-Working area -Class room
5.Perform quality tests	To perform all quality control test according to standard procedures using standard chemicals.	Knowledge of: -all quality issue related to fruits. -optional and compulsory tests -sample collection. -standard procedures of test Ability to: -pick samples from a lot. -follow the set protocols -reproduce the results -report the results.	Th: 5 Prac: 30	-Stationary -Chemicals -Glass wear -Tools/ Equipment	-Quality lab -Class room
6.Perform quarantine tests	To perform and follow all PRA analysis (pest risk analysis).	Knowledge of: -quarantine standards of destinations Ability to: -control all exotic pests -conduct PRA	Th: 5 Prac: 30	-Stationary -Chemicals -Glass Wears -Tools/ Equipment	-Lab -class room - working area

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
7. Apply occupational health and safety precaution (OHS)	To Follow and apply OHS practices	Knowledge of: - occupational health and safety Ability to: - apply occupational health and safety standards.	Th: 3 Prac: 15	-Stationary -Gloves -Mask -Long Shoes -Hair Net -Sanitizer	-Working area -Lab -class room

Module4 :Perform packaging of fruits

Objective of the Module:Equipped the trainee to ensure safe packaging in order to avoid losses and generate more income.

Duration: 105 hours Theory:15 hours Practice:90 hours

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
1.select packaging material	To select packaging material as per product requirement in an affordable cost.	<p>Knowledge of:</p> <ul style="list-style-type: none"> -organic and inorganic packaging material - packaging styles and requirements <p>Ability to:</p> <ul style="list-style-type: none"> -select packaging material for local and distance markets accordingly. -select material to avoid cross contamination during storage and transportation. 	Th: 4 Prac: 20	<ul style="list-style-type: none"> -Stationary -Packaging Material -Fruits 	<ul style="list-style-type: none"> -Store -Packaging area -Class room
2.Perform labeling	To design an effective label and it's placing.	<p>Knowledge of:</p> <ul style="list-style-type: none"> -importance of labeling -contents of a label according to the product -how to write and place a label -where to place a label <p>Ability to:</p> <ul style="list-style-type: none"> -write and place the label on appropriate area of pack. -identify pack according to label. 	Th: 5 Prac: 25	<ul style="list-style-type: none"> -Stationary -Tapes -Plastic Sheets 	<ul style="list-style-type: none"> -Packaging area -class room

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
3.Perform packaging	To perform sound packaging according to requirement.	Knowledge of: -standard pack sizes -packing procedures Ability to: -pack in small and large packing sizes. -follow set procedures. -Safe handling	Th: 5 Prac: 25	-Stationary -Packaging Material -Cutter -Knife -Tape	-Packaging area -class room
4.Ensure safe packaging	To ensure safe delivery of goods to customer by applying secure packaging.	Ability to: -provide cushioning and ventilation for safe delivery	Th: 0 Prac: 20	-Stationary -Cushioning Material	-Packaging area -Class Room

Module5: Arrange logistics for finished products

Objective of the Module: To make the trainee knowing how to control the point of origin and point of consumption in order to meet the customer needs

Duration:76 hours Theory:20 hours Practice:56 hours

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
1.maintain inventory of finished products	To Knowing what is on hand, where it is in use, and how much finished product results.	<p>Knowledge of:</p> <ul style="list-style-type: none"> -how to maintain an inventory. <p>Ability to:</p> <ul style="list-style-type: none"> controlling the transfer in of units in order to prevent the inventory from becoming too high -control the costs associated with the inventory, both from the perspective of the total value of the goods included and the tax burden generated by the cumulative value of the inventory. 	Th: 4 Prac: 20	-Stationary -Computer	-Class room -working area
2.Arrange storage	To arrange or design suitable storage system with the understanding of FIFO principles.	<p>Knowledge of:</p> <ul style="list-style-type: none"> -goods to be stored -specific and special requirements of storage <p>Ability to:</p> <ul style="list-style-type: none"> -arrange and manage storage according to need -communicate all requirements properly. 	Th: 4 Prac: 10	-Stationary -Computer	-Class Room -Shipping Area

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
3.Arrange logistics	To planning, execution, and control of the movement or placement of goods and the related supporting activities, all within a system designed to achieve specific objectives.	Ability to: -plan logistic -control point of origin and the point of consumption in order to meet customer's requirements.	Th: 4 Prac: 10	-Stationary	-Class Room -Shipping Area
4.Arrange shipment	To arrange a shipment with the understanding of cargo rules and late shipment rejections.	Knowledge of: -finished goods -cargo rules Ability to: Make and follow a shipping schedule.	Th: 4 Prac: 8	-Stationary	-Class Room -Shipping Area
5.Ensure safe and secure logistic	To ensure supporting activities, all within a system designed to achieve specific objectives.	Ability to: - control the efficient and effective forward and reverse flow.	Th: 4 Prac: 8	-Stationary	-Class Room -Shipping Area

Module6: Perform communication

Objective of the Module: To improve the natural communication skills in the trainee so that communication within all levels of organizations can be improved.

Duration: 36 hours Theory: 36 hours Practice:0 hours

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
1.communicate with store manager	To communicate effectively in order to socialize and avoid misunderstanding	<p>Knowledge of:</p> <ul style="list-style-type: none"> -communication skills -relationship of decoder and encoder <p>Ability to:</p> <ul style="list-style-type: none"> -recognize communication constraints -respect others point of view - contribute in the conversations 	Th: 6 Prac: 0	-Stationary -Computer with internet access	-Class room
2.Communicate with labor	To communicate effectively in order to socialize and avoid misunderstanding	<p>Knowledge of:</p> <ul style="list-style-type: none"> -communication skills -relationship of decoder and encoder <p>Ability to:</p> <ul style="list-style-type: none"> -recognize communication constraints -respect others point of view - contribute in the conversations 	Th: 6 Prac: 0	-Stationary -Computer with internet access	-Class room
3.Communicate with suppliers /vendors	To communicate effectively in order to socialize and avoid misunderstanding	<p>Knowledge of:</p> <ul style="list-style-type: none"> -communication skills -relationship of decoder and encoder <p>Ability to:</p> <ul style="list-style-type: none"> -recognize communication constraints -respect others point of view - contribute in the conversations 	Th: 6 Prac: 0	Stationary -Computer with internet access	Class room

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
4. Communicate with supervisors	To communicate effectively in order to socialize and avoid misunderstanding	Knowledge of: -communication skills -relationship of decoder and encoder Ability to: -recognize communication constraints -respect others point of view - contribute in the conversations	Th: 6 Prac: 0	-Stationary -Computer with internet access	-Class room
5. Communicate with colleagues/peers	To communicate effectively in order to socialize and avoid misunderstanding	Knowledge of: -communication skills -relationship of decoder and encoder Ability to: -recognize communication constraints -respect others point of view - contribute in the conversations	Th: 6 Prac: 0	-Stationary -Computer with internet access	-Class room
6. Communicate with external stake holders	To communicate effectively in order to socialize and avoid misunderstanding	Knowledge of: -communication skills -relationship of decoder and encoder Ability to: -recognize communication constraints -respect others point of view - contribute in the conversations	Th: 6 Prac: 0	-Stationary -Computer with internet access	-Class room

Module7: Upgrade skills

Objective of the Module: To produce a workforce for fruit preservation industry equipped with all the necessary skills to cope with new emerging techniques and procedures.

Duration: 66 hours Theory:6 hours Practice: 60 hours

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
1.Attend training programs	To familiarize with modern trends and build the relation of what is available and what is required.	Knowledge of: -trainings needs -level of required training Ability to: -implement training contents -identify the important measures	Th: 0 Prac:20	- Stationary -Computer with internet access	-Training areas -class room
2.Consult seniors	To take the benefit of experienced fellow for better understanding	Knowledge of: -people working around and their focused areas of work Ability to: -intermingle -share -listen	Th: 0 Prac:10	Stationary	Conference room/class rooms
3.Attend seminars or Workshop	To attend and participate in seminars/worksh ops for best delivery of services.	Knowledge of: -schedule seminars and workshops around Ability to: -select fruitful workshops -participate in seminars/ workshops	Th: 0 Prac:10	Stationary	Conference room/class rooms
4.Read books and training manuals	To improve knowledge on self-basis	Knowledge of: Related Authors, Journals, books, magazines and other reading material. Ability to: -read consistently -take out the required information	Th: 4 Prac:10	Stationary	Library/class rooms

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
5.Use internet	To use internet for improved information and understanding.	Knowledge of: -tools to use internet -basic software Ability to: -search using appropriate search engine -store and retain the information	Th: 2 Prac:10	-Stationary -Computer with Internet Connection	-Computer lab

Assessment Template

Module 1

Learning Units	Theory Days/hours	Workplace Days/hours	Recommended formative assessment	Recommended Methodology	Scheduled Dates
LU1:select type of fruits	10 hours	25 hours	- Describe how they will determine the variety to suggest to customer. -List the names of different varieties of fruits found in Pakistan.	-Short answer questions test. -Multiple Choice Questions -Direct observation from practical demonstration by trainee.	
LU2:harvest fruits	10 hours	25 hours	-identify the harvesting requirement -describe how proper handling increase shelf life -direct observation of harvesting in the field if possible.	-Short answer questions test. -Demonstration by trainee -Multiple Choice Questions	
LU3:procure fruits from market	4 hours	20 hours	-demonstrate how market survey is conduct. -list the quality factors considered while purchasing.	-Short answer questions test. -Multiple Choice Questions	
LU4:stock raw fruits in store	10 hours	20 hours	-demonstrate the standard stocking procedures -enlist the environmental factors considered in stocking	-Short answer questions test. -Demonstration by trainee -Multiple Choice Questions	
LU5:arrange packaging material	5 hours	25 hours	-list the suitable packaging material -demonstrate how to check the quality of packaging material.	-Short answer questions test. -Multiple Choice Questions -Direct observation from practical demonstration by trainee.	

Learning Units	Theory Days/hours	Workplace Days/hours	Recommended formative assessment	Recommended Methodology	Scheduled Dates
LU6:arrange preservatives	5 hours	25 hours	<ul style="list-style-type: none"> -demonstrate how preservatives should be selected. -identify the risk factors involved in the use of preservatives 	<ul style="list-style-type: none"> -Short answer questions test. -Multiple Choice Questions 	

Module 2

Learning Units	Theory Days/hours	Workplace Days/hours	Recommended formative assessment	Recommended Methodology	Scheduled Dates
LU1:perform grading on the basis of variety	4 hours	30 hours	-demonstrate grading standard procedures -identify mature and immature fruits.	-Direct observation from practical demonstration by trainee. -Multiple Choice Questions	
LU2:perform grading on the basis of size	4 hours	30 hours	-demonstrate grading of any fruit on size basis. -demonstrate the removal of ripe, over ripe and damaged fruits. -list grading standard procedures.	-Short answer questions test. -Demonstration by trainee -Multiple Choice Questions	
LU3:perform grading on the basis of behavior	4hours	30 hours	-identify the temperature and humidity limits. -demonstrate how behavior of fruits can be recognize	-Short answer questions test. -Demonstration by trainee -Multiple Choice Questions	

Module 3

Learning Units	Theory Days/hours	Workplace Days/hours	Recommended formative assessment	Recommended Methodology	Scheduled Dates
LU1:perform cleaning of fruits	10 hours	30 hours	-demonstrate the cleaning of different fruits using standard procedures -demonstrate the preparation of cleaning solutions -test any residue of cleaning solution remain on the fruit	-Short answer questions test. -Demonstration by trainee -Multiple Choice Questions	
LU2:select preservatives	5 hours	10 hours	-list allowed preservatives according to set destinations -list the reasons for rejected consignments.	-Short answer questions test. -Multiple Choice Questions -Direct observation from practical demonstration by trainee.	
LU3:apply preservatives	4 hours	40 hours	--show some techniques of applying preservatives -describe the safety precautions while applying preservatives -list the risk factors	-Direct observation from practical demonstration by trainee whilst being safety conscious. -Short answer questions test. -Illustrative test requiring diagrams -Multiple Choice Questions	
LU4:perform polishing	4 hours	30 hours	-demonstrate polishing/coating of fruit to improve quality. -enlist risk factors	-Direct observation from practical demonstration by trainee whilst being safety conscious. -Short answer	

Learning Units	Theory Days/hours	Workplace Days/hours	Recommended formative assessment	Recommended Methodology	Scheduled Dates
LU5:perform quality test	5 hours	30 hours	-identify all quality related issues. -demonstrate some commonly used quality tests. -describe how to report and reproduce results	-Direct observation from practical demonstration by trainee whilst being safety conscious. -Short answer questions test. -Multiple Choice Questions	
LU6:perform quarantine test	5 hours	30 hours	-identify quarantine tests according to fruit -demonstrate PRA analysis.	-Direct observation from practical demonstration by trainee whilst being safety conscious. -Short answer questions test. -Multiple Choice Questions	
LU7:apply OHS precautions	3 hours	15 hours	-demonstrate some occupational health and safety standard	-Direct observation from practical demonstration by trainee -Short answer questions test.	

Module 4

Learning Units	Theory Days/hours	Workplace Days/hours	Recommended formative assessment	Recommended Methodology	Scheduled Dates
LU1:select packaging material	5 hours	20 hours	-demonstrate the quality of packaging material for local and distance markets. -list organic and inorganic material according to fruits	-Demonstration by trainee -Multiple Choice Questions	
LU2:perform labeling	5 hours	25 hours	-list important contents of label. -demonstrate how to design a simple label. -show the difference between identification label and information label.	-Short answer questions test. -Illustrative test requiring diagrams -Demonstration by trainee -Multiple Choice Questions	
LU3:perform packaging	5 hours	25 hours	-list the standard sizes of packages for fruits. -demonstrate the packaging of a fruit carton for a distance market.	-Direct observation from practical demonstration by trainee -Short answer questions test. -Multiple Choice Questions	
LU4:ensure safe packaging	-	20 hours	-describe how cushioning and ventilation helps in safe packaging.	-Short answer questions test. -Demonstration by trainee -Multiple Choice Questions	

Module 5

Learning Units	Theory Days/hours	Workplace Days/hours	Recommended formative assessment	Recommended Methodology	Scheduled Dates
LU1:maintain inventory of finished products	4 hours	20 hours	-demonstrate how inventory is maintained -describe how cost associated to inventory can be controlled.	-Short answer questions test. -Demonstration by trainee -Multiple Choice Questions	
LU2:arrange storage	4 hours	10 hours	-list specific requirements of storage. -list the factors influence the proper storage practices.	-Short answer questions test. -Multiple Choice Questions	
LU3:arrange logistics	4 hours	10 hours	-demonstrate how logistics can be plan according to customer requirements. -identify the risk factors	-Short answer questions test. -Demonstration by trainee -Multiple Choice Questions	
LU4:arrange shipment	4 hours	8 hours	-list the cargo rules of Pakistan -design a shipping schedule and its implementation.	-Short answer questions test. -Multiple Choice Questions	
LU5:ensure safe & secure shipment	4 hours	8 hours	-describe how forward and reverse flow can be maintained for secure shipment.	-Short answer questions test. -Multiple Choice Questions	

Module 6

Learning Units	Theory Days/ hours	Workplace Days/ hours	Recommended formative assessment	Recommended Methodology	Scheduled Dates
LU1:communicate with store manager	6 hours		-Demonstrate some examples of good and bad communication with store manager -list the advantages of effective communication	-Direct observation sessional marking. -short Q/A	
LU2:communicate with labor	6 hours		Demonstrate some examples of good and bad communication with labor -list the advantages of effective communication	-Direct observation sessional marking -Short Q/A	
LU3:communicate with suppliers/vendors	6 hours		Demonstrate some examples of good and bad communication with suppliers /vendors -list the advantages of effective communication	-Direct observation sessional marking -Short Q/A	
LU4:communicate with supervisors	6 hours		Demonstrate some examples of good and bad communication with supervisors -list the advantages of effective communication	-Direct observation sessional marking -Short Q/A	

Learning Units	Theory Days/ hours	Workplace Days/ hours	Recommended formative assessment	Recommended Methodology	Scheduled Dates
LU5:communicate with colleagues/peers	6 hours		Demonstrate some examples of good and bad communication with peers -list the advantages of effective communication	-Direct observation sessional marking -Short Q/A	
LU6:communicate with external stake holders	6 hours		Demonstrate some examples of good and bad communication with external stake holders -list the advantages of effective communication	-Direct observation sessional marking -short Q/A	

Module 7

Learning Units	Theory Days/ hours	Workplace Days/hours	Recommended formative assessment	Recommended Methodology	Scheduled Dates
LU1:attend training programs	-	20 hours	-list the attitudes required to attend the training -demonstrate a general 30 mints session.	-Direct observation -Demonstration by trainee -Multiple Choice Questions	
LU2:consult seniors	-	10 hours	-list the importance of conversations with experience workers.	-Direct observation	
LU3:attend workshops and seminars	-	10 hours	-list benefits of attending and participating in workshops and seminars	-Short answer questions test.	
LU4:read books and training manuals	4 hours	10 hours	-describe how to summarize huge reading material	-Short answer questions test.	
LU5:use internet	2 hours	10 hours	-demonstrate how to search effectively -list the common search engines used	-Direct observation from practical demonstration by trainee on a computer -Short answer questions test.	

Supportive notes

- Assessment context
- Critical aspects
- Assessment condition
Assessment can be taken according to the availability of resources as there are more options if practical demonstrations are not possible but in some cases practical delivery is necessary.
- Resources required for assessment
Stationary items, routine lab material used in during the course.

List of Tools, Machinery & Equipment

Name of Trade	Fruit Preservation, Packaging & Logistics
Duration	6 Months

Sr. No.	Name of Item/ Equipment / Tools	Qty
1.	Fruit Buckets	5
2.	Containers	10
3.	Gloves	3 boxes
4.	Safety Caps	50
5.	Fire Extinguishers	1
6.	Packaging material	5
7.	Plucking tools	50
8.	Lab tools	As per need
9.	Knives	25
10.	Cutters	25
11.	Tapes	25
12.	Storage Tanks	1
13.	Chillers	1
14.	Trolleys	3
15.	Rope	5
16.	Bags	5 Packets

17.	Net	5 packets
18.	Trays	5
19.	Kitchen Balance	4
20.	Electronic Balance	4
21.	Grading Tools	As per need
22.	Refrigerator	1
23.	Polishing Equipment and tools	As per need
24.	Product testing tools	As per need

List of Consumable Supplies

Name of Trade	Fruit Preservation, Packaging & Logistics
Duration	6 Months

Sr. No.	Name of Consumable Supplies
1.	All seasonal fruits
2.	Disposable mask, gloves, hair caps
3.	Cleaning materials
4.	Packaging material
5.	Stationary
6.	Glass wears of lab
7.	Chemicals for quality test
8.	Preservatives
9.	Polishing material
10.	Cushioning material
11	Lab Coat

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