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Norwegian Embassy
Islamabad



FOOD PROCESSING & PACKAGING TECHNICIAN



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TRAINER GUIDE

National Vocational Certificate Level 2

Version 1 - November, 2019



Implemented by

giz Deutsche Gesellschaft
für Internationale
Zusammenarbeit (GIZ) GmbH

Published by

National Vocational and Technical Training Commission
Government of Pakistan

Headquarter

Plot 38, Kirthar Road, Sector H-9/4, Islamabad, Pakistan
www.navttc.org

Responsible

Director General Skills Standard and Curricula, National Vocational and Technical Training Commission
National Deputy Head, TVET Sector Support Programme, Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

Layout & design

SAP Communications

Photo Credits

TVET Sector Support Programme

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This document has been produced with the technical assistance of the TVET Sector Support Programme, which is funded by the European Union, the Federal Republic of Germany and the Royal Norwegian Embassy and has been commissioned by the German Federal Ministry for Economic Cooperation and Development (BMZ). The Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH in close collaboration with the National Vocational and Technical Training Commission (NAVTTTC) as well as provincial Technical Education and Vocational Training Authorities (TEVTAs), Punjab Vocational Training Council (PVTC), Qualification Awarding Bodies (QABs)s and private sector organizations.

Document Version

November, 2019

Islamabad, Pakistan

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Introduction

Competence-based training helps to bridge the gap between what is taught in training and what tasks will be performed on the job. Training trainees to perform actual job functions helps to ensure that future front-line workers have the skills, knowledge and abilities required to perform their jobs properly, safely and effectively. In addition to competence-based training, assessment based on the performance of actual work competencies helps to ensure that:

- Trainees are performing their work tasks as safely as possible
- Performance gaps are recognized prior to serious incidents
- Training can be implemented to improve competence.

There are significant benefits to competence-based training:

1. Cost effectiveness

Since training activities and assessments in a competence-based approach are goal-oriented, trainers focus on clearly defined areas of skills, knowledge and understanding that their own industry has defined in the competence standards. At the same time, trainees are more motivated to learn when they realize the benefits of improved performance.

2. Efficiency

The transfer gap between the training environment and working on the job is reduced substantially in a competence-based approach. This is because training and assessment are relevant to what needs to be done on the job. As a result, it takes less time for trainees to become competent in the required areas. This, in turn, contributes to improved efficiency where training and assessment are concerned.

3. Increased productivity

When trainees become competent in the competence standards that their own industry has defined, when they know what the performance expectations are and receive recognition for their abilities through successful assessments, they are likely to be more motivated and experience higher job satisfaction. The result is improved productivity for organizations. The communication and constructive feedback between future employers and employees will improve as a result of a competence-based approach, which can also increase productivity.

4. Reduced risk

Using a competence-based approach to training, development, and assessment, employers are able to create project teams of people with complementary skills. A trainee's record of the skills, knowledge and understanding relating to the competence standards they have achieved can be used by a future employer to identify and provide further relevant training and assessment for new skills areas. Competence standards can shape employee development and promotional paths within an organization and give employees the opportunity to learn more competencies beyond their roles. It can also provide organizations with greater ability to scale and flex as needed, thereby reducing the risk they face.

5. Increased customer satisfaction

Employees who have been trained and assessed using a competence-based approach are, by the definition of the relevant competence standards, able to perform the required tasks associated with a job. The knock-on effect is that, in service-related industries, they are able to provide high service levels, thereby increasing customer satisfaction. In production or manufacturing industries, they are able to work closely to industry standards in a more effective and efficient way.

Lesson plans

This manual provides a series of lesson plans that will guide delivery of each module for the *Food Processing & Packaging Technician* qualification. It is important for trainers to be flexible and be ready to adapt lesson plans to suit the context of the subject and the needs of their trainees.

Good teachers acknowledge that CBT means each and every trainee in the class learns at a different speed. The good teacher is prepared to throw aside the day's lesson plan and do something different (and unplanned) for the class even if it means 'writing' a lesson plan for each trainee to match their learning pace for that day or week.

Learning by doing is different from learning theory and then applying it. To learn to do something, trainees need someone looking over their shoulder saying 'it's not quite like that, it's like this', 'you do it like this because ...', or even 'tell me why you chose to do it like this?'

In this way, trainees learn that theoretical knowledge is meaningless if it is not seen in the context of what they are doing. In other words, if a trainee doesn't know why they do something, they will not do it competently (skills underpinned by knowledge = competent performer).

This is how a *Food Processing & Packaging Technician* acquires a practical grasp of the standards expected. It's not by learning it in theory, but because those standards are acquired through correction by people who show what the standards are, and correct the trainee where they do not meet those standards, and where they repeat it correction until they have internalized those standards.

Demonstration of skill

Demonstration or modeling a skill is a powerful tool, which is used, in vocational training. The instructions for trainers for demonstration are as under:

- a) Read the Procedure mentioned in the Trainer Guide for the relevant Learning Unit before demonstration.
- b) Arrange all tools, equipment and consumable material, which are required for demonstration of a skill.
- c) Practice the skill before demonstration to trainees, if possible.
- d) Introduce the skill to trainees clearly at the commencement of demonstration.
- e) Explain how the skill relates to the skill(s) already acquired and describe the expected results or show the objects to trainees.
- f) Carry out demonstration in a way that can be seen by all trainees.
- g) Perform each step slowly and describe each step clearly so that all trainees can hear and understand.
- h) Identify critical or complex steps, or steps that involve safety precautions to be followed.
- i) Explain theoretical knowledge where applicable and ask questions to trainees to test their understanding.

- j) Repeat critical steps in demonstration, if required.
- k) Summarize the demonstration by asking questions to trainees.

FORMAT FOR LESSON PLAN			
Module 6: Perform Food Processing			
Learning Unit 1: Prepare Food for Processing			
Methods	Key Notes	Media	Time
The tools, material and techniques used for preparing different types of food stuff for processing			
Introduction			
This session will introduce learners to the tools, techniques and material used for preparing different types of food stuff for processing, using presentation, demonstration, question and answer, and practical skills development.			
Main Body			
<ul style="list-style-type: none"> • Define preparatory operations; (washing, sorting, grading, peeling etc.) • Describe dressing of meat (removal of skin, removal of viscera and cutting of meat etc.) • Explain the process of shelling of eggs and dry fruits. (Candling, washing, breaking, hammering etc.) • Describe the process of batch loading (selection, weighing, put values according to recipe 			

in PLC etc.)
Conclusion
To conclude the session, review the tools, techniques and material used for preparing foods for processing. Give learners the opportunity to ask questions.
Assessment
Question and answer, Group discussion with feedback, observation of practice skills development
Total time: 45 min

Overview of the program

Course: <i>Food Processing & Packaging Technician (Level II)</i>	Total Course Duration: 340 Hrs.
Course Overview:	
<p>In this training program trainee will learn and acquire specialized knowledge and practical skills required to function as a Food Processing & Packaging Technician in Food Processing and Packaging industry. The specific objectives of developing these qualifications are as under:</p> <ul style="list-style-type: none"> • Improve the overall quality of training delivery and setting national benchmarks for training of Food Processing & Packaging Technician in the country. • Provide flexible pathways and progressions to learner enabling them to receive relevant, up-to-date and current skills in Food Industry. • Provide basis for competency-based assessment which is recognized and accepted by employers in modern days. • Establish a standardized and sustainable system of training in consultation with the industry for Food Processing & Packaging Technician in the country. 	

Module	Learning Unit	Duration
Module 1. Comply with Personal Health and Safety Guidelines		50
Module 2. Communicate the Workplace Policy and Procedure		40
Module 3. Perform Basic Communication (Specific)		50
Module 4. Perform Basic Computer Application (Specific)		60

Module	Learning Unit	Duration
Module 5. Maintain Tools and Equipment	LU1. Perform cleaning of tools and equipment LU2. Apply food grade lubricants of tools/equipment LU3. Implement Internal Control Plan (ICP) for tools and equipment's LU4. Adopt housekeeping practices for tools/equipment (e.g. 5 S)	40
Module 6. Receive Raw Materials as per Manufacturing Order	LU1. Identify different raw materials as per food processing manufacturing order LU2. Ensure raw material quality parameters (physical, chemical, biological, color or flavor retention) LU3. Measure the ingredients according to manufacturing order/recipe LU4. Maintain record of all received/labeled materials as per SOPs LU5. Store the ingredients according to standard procedure LU6. Handle the raw materials in an appropriate manner LU7. Provide raw materials to processing unit as per requirements of manufacturing order	40
Module 7. Perform Food Cleaning and Sanitation	LU1. Ensure availability of all cleaning and sanitation materials LU2. Ensure all utilities are available LU3. Perform cleaning and sanitation as per schedule/procedure LU4. Verify cleaning and sanitation by analytical/swab test/ATP-testing LU5. Prepare log sheets as per procedure LU6. Control cleaning solution temperature to melt fats/meats LU7. Ensure equipment free of visible soil, haze or water beads LU8. Sanitize inaccessible parts of machinery prior to assembling LU9. Ensure pre-operation Inspection	60

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Module-5

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Trainer's guidelines

Module 5: 072100980 Maintain Tools and Equipment			
Learning Unit	Suggested Teaching/ Learning Activities	Delivery Context	Media
LU1: Perform cleaning of tools and equipment	<p>Enable learners to practice using the appropriate tools and equipment for performing cleaning of tools and equipment in a controlled environment.</p> <p>Learners must be able to practice and develop their knowledge and skills relating to perform cleaning of tools and equipment in an appropriate practical setting.</p> <p>The learners must be able to select the choice of wet or dry cleaning for particular machines, equipment or parts. They must be able to dismantle equipment or machine and again assemble it after cleaning or sanitation.</p> <p>Visit food plant and ask trainees to note their observations regarding cleaning operations being conducted at plant. At the end of visit, share all observations and clarify concepts with the help of industry focal person.</p> <p>Ensure that learners have the opportunity to ask questions to support their understanding.</p>	<p>Food Lab</p> <p>Classroom</p> <p>Industrial visit</p>	<p>Video clips</p> <p>Pamphlets</p> <p>Learner guide</p> <p>Handouts</p> <p>Flow diagrams</p> <p>Animations</p> <p>Working models</p>
LU2: Apply food grade lubricants of tools/equipment	<p>Enable learners to practice using the appropriate tools and equipment for applying food grade lubricants to tools and equipment in a controlled environment.</p>	<p>Food Lab</p> <p>Classroom</p> <p>Industrial visit</p>	<p>Lubricants</p> <p>Animations</p> <p>Video clips</p>

Module 5: 072100980 Maintain Tools and Equipment			
Learning Unit	Suggested Teaching/ Learning Activities	Delivery Context	Media
	<p>Learners must be able to practice and develop their knowledge and skills relating to apply food grade lubricants to tools and equipment on proper schedules and with recommended strength in an appropriate practical setting.</p> <p>The learners must be able to know the lubrication points of tools and equipment and proper way of lubrication.</p> <p>Ensure that learners have the opportunity to ask questions to support their understanding.</p>		<p>Pamphlets</p> <p>Learner guide</p> <p>Handouts</p> <p>Working models</p>
LU3: Implement Internal Control Plan (ICP) for tools and equipment's	<p>Enable learners to practice using the appropriate tools and equipment for implementing Internal Control Plan (ICP) for tools and equipment's in a controlled environment.</p> <p>Learners must be able to practice and develop their knowledge and skills relating to implementing the Internal Control Plan (ICP) for tools and equipment's in an appropriate practical setting.</p> <p>Ensure that learners have the opportunity to ask questions to support their understanding.</p>	<p>Food Lab</p> <p>Classroom</p> <p>Industrial visit</p>	<p>Video clips</p> <p>Pamphlets</p> <p>Learner guide</p> <p>Handouts</p> <p>Flip charts</p>
LU4: Adopt housekeeping practices for tools/equipment (e.g. 5 S)	<p>Enable learners to practice using the appropriate tools and equipment for adopting housekeeping practices for tools/equipment (e.g. 5 S: 1S: Sort 2S: Set in order 3S: Shine 4S: Standardize 5S: Systemize) in a controlled environment.</p>	<p>Food Lab</p> <p>Classroom</p> <p>Industrial visit</p>	<p>Illustrations</p> <p>Video clips</p> <p>Pamphlets</p> <p>Learner guide</p> <p>Handouts</p>

Module 5: 072100980 Maintain Tools and Equipment			
Learning Unit	Suggested Teaching/ Learning Activities	Delivery Context	Media
	<p>Learners must be able to practice and develop their knowledge and skills relating to adopting housekeeping practices for tools/equipment (e.g. 5 S) in an appropriate practical setting.</p> <p>The learners must be able to sort or set in order the tools / equipment in lab area.</p> <p>Ensure that learners have the opportunity to ask questions to support their understanding.</p>		Charts

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Module 6: 072100981 Receive Raw Materials as per Manufacturing Order			
Learning Unit	Suggested Teaching/ Learning Activities	Delivery Context	Media
LU1: Identify different raw materials as per food processing manufacturing order	<p>Enable learners to practice using the appropriate tools and equipment for identifying different raw materials as per food processing manufacturing order in a controlled environment.</p> <p>Learners must be able to practice and develop their knowledge and skills relating to identifying different raw materials as per food processing manufacturing order in an appropriate practical setting.</p> <p>The learners must be able to identify different food raw materials and ingredients and their condition.</p> <p>Ensure that learners have the opportunity to ask questions to support their understanding.</p>	Food Lab Classroom Industrial visit	Video clips Pamphlets Learner guide Handouts Flip charts Pics of different ingredients Specimens of food labels
LU2: Ensure raw material quality parameters (physical, chemical, biological, color or flavor retention)	<p>Enable learners to practice using the appropriate tools and equipment for ensuring raw material quality parameters (physical, chemical, biological, color or flavor retention) in a controlled environment.</p> <p>Learners must be able to practice and develop their knowledge and skills relating to ensuring raw material quality parameters (physical, chemical, biological, color or flavor retention) in an appropriate practical setting.</p> <p>The learners must be able to perform confirmatory tests for different raw materials to</p>	Food Lab Classroom Industrial visit	Video clips Pamphlets Learner guide Handouts Flip charts Pics of different ingredients

Module 6: 072100981 Receive Raw Materials as per Manufacturing Order			
Learning Unit	Suggested Teaching/ Learning Activities	Delivery Context	Media
	<p>assure quality standards of organization.</p> <p>Ensure that learners have the opportunity to ask questions to support their understanding.</p>		
<p>LU3: Measure the ingredients according to manufacturing order/recipe</p>	<p>Enable learners to practice using the appropriate tools and equipment to measure the ingredients according to manufacturing order/recipe in a controlled environment.</p> <p>Learners must be able to practice and develop their knowledge and skills relating to measure the ingredients according to manufacturing order/recipe in an appropriate practical setting.</p> <p>The learners must be able to perform volumetric, weight and dimensional measurements for food ingredients according to manufacturing order.</p> <p>Ensure that learners have the opportunity to ask questions to support their understanding.</p>	<p>Food Lab Classroom Industrial visit</p>	<p>Video clips Pamphlets Learner guide Handouts Flip charts Pics of different measuring instruments Animations</p>
<p>LU4: Maintain record of all received/labeled materials as per SOPs</p>	<p>Enable learners to practice using the appropriate tools and equipment to maintain record of all received/labeled materials as per SOPs in a controlled environment.</p> <p>Learners must be able to practice and develop their knowledge and skills relating to maintain record of all received/labeled materials as per SOPs in an appropriate practical setting.</p> <p>The learners should perform record keeping of all</p>	<p>Food Lab Classroom Industrial visit</p>	<p>Log book Folders Learner guide Handouts Requisition forms Different labels of food materials</p>

Module 6: 072100981 Receive Raw Materials as per Manufacturing Order			
Learning Unit	Suggested Teaching/ Learning Activities	Delivery Context	Media
	received materials according to SOP. Ensure that learners have the opportunity to ask questions to support their understanding.		
LU5: Store the ingredients according to standard procedure	Enable learners to practice using the appropriate tools and equipment to store the ingredients according to standard procedure in a controlled environment. Learners must be able to practice and develop their knowledge and skills relating to store the ingredients according to standard procedure in an appropriate practical setting. The learners must perform the zoning concept for storage of food ingredients like fats, meats, fruits, vegetables, frozen cultures, dairy ingredients, liquid or solid ingredients. Ensure that learners have the opportunity to ask questions to support their understanding.	Food Lab Classroom Industrial visit	Video clips Pamphlets Learner guide Handouts Carts Trolleys
LU6: Handle the raw materials in an appropriate manner	Enable learners to practice using the appropriate tools and equipment to handle the raw materials in an appropriate manner in a controlled environment. Learners must be able to practice and develop their knowledge and skills relating to handle the raw materials in an appropriate manner in an appropriate practical setting.	Food Lab Classroom Industrial visit	Illustrations Video clips Pamphlets Learner guide Handouts

Module 6: 072100981 Receive Raw Materials as per Manufacturing Order			
Learning Unit	Suggested Teaching/ Learning Activities	Delivery Context	Media
	Ensure that learners have the opportunity to ask questions to support their understanding.		
LU7: Provide raw materials to processing unit as per requirements of manufacturing order	<p>Enable learners to practice using the appropriate tools and equipment to provide raw materials to processing unit as per requirements of manufacturing order in a controlled environment.</p> <p>Learners must be able to practice and develop their knowledge and skills relating to provide raw materials to processing unit as per requirements of manufacturing order in an appropriate practical setting.</p> <p>Ensure that learners have the opportunity to ask questions to support their understanding.</p>	<p>Food Lab</p> <p>Classroom</p> <p>Industrial visit</p>	<p>Video clips</p> <p>Pamphlets</p> <p>Learner guide</p> <p>Handouts</p> <p>Flip charts</p>

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Module 7: 072100982 Perform Food Cleaning and Sanitation			
Learning Unit	Suggested Teaching/ Learning Activities	Delivery Context	Media
LU1: Ensure availability of all cleaning and sanitation materials	<p>Enable learners to practice using the appropriate tools and equipment ensuring the availability of all cleaning and sanitation materials in a controlled environment.</p> <p>Learners must be able to practice and develop their knowledge and skills relating to ensure the availability of all cleaning and sanitation materials in an appropriate practical setting. Ensure that learners have the opportunity to ask questions to support their understanding.</p> <p>Plan industrial visit to observe different cleaning agents and sanitizers to be used for equipment and machinery. Ask trainees to note their observations regarding cleaning and sanitation. Arrange group discussion at the end of visit to consolidate the notes and observations performed during visit.</p>	Food Lab Classroom Industrial visit	Sanitizers Compressed gas Diagrams Pamphlets Learner guide Handouts Posters
LU2: Ensure all utilities are available	<p>Enable learners to practice using the appropriate tools and equipment ensuring all utilities are available in a controlled environment.</p> <p>Learners must be able to practice and develop their knowledge and skills relating to ensuring all utilities are available in an appropriate practical setting.</p>	Food Lab Classroom Industrial visit	Photos/diagrams Video clips Pamphlets Learner guide Handouts

Module 7: 072100982 Perform Food Cleaning and Sanitation			
Learning Unit	Suggested Teaching/ Learning Activities	Delivery Context	Media
	<p>Plan a visit to food processing industry to observe utilities that are required in cleaning process. Give assignment to prepare a chart showing all utilities along with their functions and methods.</p> <p>Arrange group discussion in class to clarify the concepts. Ensure that learners have the opportunity to ask questions to support their understanding.</p>		
<p>LU3: Cleaning and sanitation as per schedule/procedure</p>	<p>Enable learners to practice using the appropriate tools and equipment for cleaning and sanitation as per schedule/procedure in a controlled environment.</p> <p>Learners must be able to practice and develop their knowledge and skills relating to cleaning and sanitation as per schedule/procedure in an appropriate practical setting.</p> <p>The learners must know the timing of machines to be cleaned or sanitized. Cleaning must be performed by following approved methods instead of short cut method.</p> <p>Ensure that learners have the opportunity to ask questions to support their understanding.</p>	<p>Food Lab Classroom Industrial visit</p>	<p>Illustrations Video clips Pamphlets Learner guide Handouts Flip charts</p>
<p>LU4: Verify cleaning and sanitation by analytical/swab</p>	<p>Enable learners to practice using the appropriate tools and equipment verifying cleaning and sanitation by analytical/swab test/ATP-testing in a controlled environment.</p>	<p>Food Lab Classroom Industrial visit</p>	<p>Video clips Pamphlets Learner guide</p>

Module 7: 072100982 Perform Food Cleaning and Sanitation			
Learning Unit	Suggested Teaching/ Learning Activities	Delivery Context	Media
test/ATP-testing	Learners must be able to practice and develop their knowledge and skills relating to verifying cleaning and sanitation by analytical/swab test/ATP-testing in an appropriate practical setting. Ensure that learners have the opportunity to ask questions to support their understanding.		Handouts Flip charts
LU5: Prepare log sheets as per procedure	Enable learners to practice using the appropriate tools and equipment to preparing the log sheets as per procedure in a controlled environment. Learners must be able to practice and develop their knowledge and skills relating to preparing the log sheets as per procedure in an appropriate practical setting. The learners must be able to understand and fill required information in log sheets used in cleaning and sanitation processes. Ensure that learners have the opportunity to ask questions to support their understanding.	Food Lab Classroom Industrial visit	Specimens of log sheets Pamphlets Learner guide Handouts Charts
LU6: Control cleaning solution temperature to melt fats/meats	Enable learners to practice using the appropriate tools and equipment controlling cleaning solution temperature to melt fats/meats in a controlled environment. Learners must be able to practice and develop their knowledge and skills relating to controlling cleaning solution temperature to melt fats/meats	Food Lab Classroom Industrial visit	Acids Alakalis Animations Video clips Pamphlets

Module 7: 072100982 Perform Food Cleaning and Sanitation			
Learning Unit	Suggested Teaching/ Learning Activities	Delivery Context	Media
	<p>in an appropriate practical setting.</p> <p>The learner must be able to apply accurate temperature of cleaning solutions to be used for fats, proteins or minerals.</p> <p>Ensure that learners have the opportunity to ask questions to support their understanding.</p>		<p>Learner guide</p> <p>Handouts</p> <p>Charts</p>
<p>LU7: Ensure equipment free of visible soil, haze or water beads</p>	<p>Enable learners to practice using the appropriate tools and equipment ensuring equipment free of visible soil, haze or water beads in a controlled environment.</p> <p>Learners must be able to practice and develop their knowledge and skills relating to ensuring equipment free of visible soil, haze or water beads in an appropriate practical setting.</p> <p>Ensure that learners have the opportunity to ask questions to support their understanding.</p>	<p>Food Lab</p> <p>Classroom</p> <p>Industrial visit</p>	<p>Video clips</p> <p>Pamphlets</p> <p>Learner guide</p> <p>Handouts</p> <p>Flip charts</p>
<p>LU8: Sanitize inaccessible parts of machinery prior to assembling</p>	<p>Enable learners to practice using the appropriate tools and equipment sanitizing inaccessible parts of machinery prior to assembling in a controlled environment.</p> <p>Learners must be able to practice and develop their knowledge and skills relating to sanitizing inaccessible parts of machinery prior to assembling in an appropriate practical setting.</p> <p>Ensure that learners have the opportunity to ask</p>	<p>Food Lab</p> <p>Classroom</p> <p>Industrial visit</p>	<p>Working model</p> <p>Video clips</p> <p>Pamphlets</p> <p>Learner guide</p> <p>Handouts</p> <p>Poster</p>

Module 7: 072100982 Perform Food Cleaning and Sanitation			
Learning Unit	Suggested Teaching/ Learning Activities	Delivery Context	Media
	<p>questions to support their understanding.</p> <p>The learners must be able to dismantle the machine parts and assembling again after sanitizing according to recommended protocol. Assembling should be performed error free.</p>		
<p>LU9: Ensure pre-operation Inspection</p>	<p>Enable learners to practice using the appropriate tools and equipment ensuring pre-operation Inspection in a controlled environment.</p> <p>Learners must be able to practice and develop their knowledge and skills relating to ensuring pre-operation Inspection in an appropriate practical setting.</p> <p>Ensure that learners have the opportunity to ask questions to support their understanding.</p> <p>The learner must be able to understand different signs of PLC of machine, interpret the beep that may arise from machine before operation and may apply controls to rectify in case of non-conformity.</p>	<p>Food Lab Classroom Industrial visit</p>	<p>Working model Video clips Pamphlets Learner guide Handouts Flip charts Animations</p>

Frequently Asked Questions

<p>1. What is Competency Based Training (CBT) and how is it different from currently offered trainings in institutes?</p>	<p>Competency-based training (CBT) is an approach to vocational education and training that places emphasis on what a person can do in the workplace as a result of completing a program of training. Compared to conventional programs, the competency based training is not primarily content based; it rather focuses on the competence requirement of the envisaged job role. The whole qualification refers to certain industry standard criterion and is modularized in nature rather than being course oriented.</p>
<p>2. What is the passing criterion for CBT certificate?</p>	<p>You shall be required to be declared “Competent” in the summative assessment to attain the certificate.</p>
<p>3. What are the entry requirements for this course?</p>	<p>The entry requirement for this course is Middle or equivalent.</p>
<p>4. How can I progress in my educational career after attaining this certificate?</p>	<p>You shall be eligible to take admission in the National Vocational Certificate in level-5, DAE in Food Processing Technology or equivalent course. In certain case, you may be required to attain an equivalence certificate from The Inter Board Committee of Chairmen (IBCC).</p>
<p>5. If I have the experience and skills mentioned in the competency standards, do I still need to attend the course to attain this certificate?</p>	<p>You can opt to take part in the Recognition of Prior Learning (RPL) program by contacting the relevant training institute and getting assessed by providing the required evidences.</p>
<p>6. What is the entry requirement for</p>	<p>There is no general entry requirement. The institute shall assess you, identify your competence gaps and offer</p>

Recognition of Prior Learning program (RPL)?	you courses to cover the gaps; after which you can take up the final assessment.
7. Is there any age restriction for entry in this course or Recognition of Prior Learning program (RPL)?	There are no age restrictions to enter this course or take up the Recognition of Prior Learning program
8. What is the duration of this course?	The duration of the course work is 2 years (4 Levels).
9. What are the class timings?	The classes are normally offered 25 days a month from 08:00am to 01:30pm. These may vary according to the practices of certain institutes.
10. What is equivalence of this certificate with other qualifications?	As per the national vocational qualifications framework, the level-4 certificate is equivalent to Matriculation. The criteria for equivalence and equivalence certificate can be obtained from The Inter Board Committee of Chairmen (IBCC).
11. What is the importance of this certificate in National and International job market?	This certificate is based on the nationally standardized and notified competency standards by National Vocational and Technical Training Commission (NAVTTTC). These standards are also recognized worldwide as all the standards are coded using international methodology and are accessible to the employers worldwide through NAVTTTC website.
12. Which jobs can I get after attaining this certificate? Are there job for this certificate in public sector as well?	You shall be able to take up jobs in Food Processing industry like, Dairy industry, Beverage industry, baking and confectionery industry, meat and egg industry as well as fruits/vegetable processing industry.
13. What are possible career progressions in industry after attaining this	You shall be able to progress up to the level of supervisor after attaining sufficient experience, knowledge and skills during the job. Attaining additional

certificate?	relevant qualifications may aid your career advancement to even higher levels.
14. Is this certificate recognized by any competent authority in Pakistan?	This certificate is based on the nationally standardized and notified competency standards by National Vocational and Technical Training Commission (NAVTTTC). The official certificates shall be awarded by the relevant certificate awarding body.
15. Is on-the-job training mandatory for this certificate? If yes, what is the duration of on-the-job training?	On-the-job training is not a requirement for final / summative assessment of this certificate. However, taking up on-the-job training after or during the course work may add your chances to get a job afterwards.
16. How much salary can I get on job after attaining this certificate?	The minimum wages announced by the Government of Pakistan in 2019 are PKR 17,500. This may vary in subsequent years and different regions of the country. Progressive employers may pay more than the mentioned amount.
17. Are there any alternative certificates which I can take up?	There are some short courses offered by some training institutes on this subject. Some institutes may still be offering conventional certificate courses in the field.
18. What is the teaching language of this course?	The teaching language of this course is Urdu and English.
19. What is the examination / assessment system in this program?	Competency based assessments are organized by training institutes during the course which serve the purpose of assessing the progress and preparedness of each student. Final / summative assessments are organized by the relevant qualification awarding bodies at the end of the certificate program. You shall be required to be declared "Competent" in the summative assessment to attain the certificate.
20. Does this certificate enable me to work as freelancer?	You can start your small business of Baking, juice processing, carbonated beverages and confectionery etc. You may need additional skills on entrepreneurship to support your initiative.

Test Yourself (Multiple Choice Questions)

Module 05

8. Which of the following is used for drying of utensils after sanitizing?
- A. Tissues
 - B. Towels
 - C. Air
 - D. Vacuum
9. Which is the commonly used sanitizing agent?
- A. Wax
 - B. Oil
 - C. Chlorine
 - D. Sodium chloride
10. Which of the following is related to 5S?
- A. Personal hygiene
 - B. Sanitation of building
 - C. Maintenance of machines
 - D. Housekeeping for tools and equipment
11. Which of the following is important lubricant used in food processing industry?
- A. Water
 - B. Alkali
 - C. Grease
 - D. Acid

Module 06

12. Do hygroscopic compounds include?
- A. NaOH
 - B. H₂O
 - C. NaCl
 - D. H₃O

13. How acidity of sample is measured?
- A. Filtration
 - B. Distillation
 - C. Titration
 - D. Digestion
14. By what means error in analysis can be minimized?
- A. Calibration
 - B. Sanitation
 - C. Evaporation
 - D. Distillation
15. Which of the following shows melting point property?
- A. Acids
 - B. Bases
 - C. Lipids
 - D. Proteins
16. What is the safe temperature to be used in frozen storage?
- A. 10 °C
 - B. 5 °C
 - C. 0 °C
 - D. -10 °C
17. What is measuring device to assess the thickening of solutions?
- A. Vinometer
 - B. Turbidity meter
 - C. Viscometer
 - D. Polari meter
18. What is the unit used for total soluble solids in a solution?
- A. TDS
 - B. TSS
 - C. SNF
 - D. MS

19. What type of testing can be performed by Kjeldahl Apparatus?

- A. Sugars
- B. Proteins
- C. Fats
- D. Minerals

20. What is determined by use of Muffle furnace?

- A. Sugars
- B. Proteins
- C. Fats
- D. Ash

21. What type of solution is prepared by gram equivalent weight?

- A. Molar solution
- B. Molal solution
- C. Normal solution
- D. Percent solution

Module 07

22. By which of the following, steam can be generated?

- A. Pumps
- B. Blowers
- C. Boilers
- D. Conveyors

23. What does Cleaning In Place (CIP) play role in sanitation?

- A. Glassware
- B. Loose accessories
- C. Inaccessible parts
- D. Utensils

24. How separation of dust, leaves and straws from food lots is practiced?

- A. Dry cleaning
- B. Wet cleaning
- C. Sanitizing
- D. Waxing

25. What is the method used in cleaning of conveyors and belts?
 A. Dry cleaning
 B. Wet cleaning
 C. Sanitizing
 D. Waxing
26. What is color code for cleaning tools used in cleaning of food containing area?
 A. Red color
 B. Green color
 C. Yellow color
 D. Blue color
27. How disinfection of area is verified?
 A. pH
 B. Brix
 C. RH
 D. Swab
28. What acid can clean stainless steel surfaces effectively?
 A. Nitric acid
 B. Acetic acid
 C. Tartaric acid
 D. Malic acid

KEY for MCQ's

Sr. #	Ans.	Sr. #	Ans.	Sr. #	Ans.	Sr. #	Ans.
8	C	13	C	18	B	23	C
9	C	14	A	19	B	24	A
10	D	15	C	20	D	25	B
11	C	16	D	21	C	26	B
12	A	17	C	22	C	27	D
						28	A

