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FOOD PROCESSING & PACKAGING TECHNICIAN



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TRAINER GUIDE

National Vocational Certificate Level 4

Version 1 - November, 2019



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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			
Module6: 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 IV)</i>	Total Course Duration: 425 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. Contribute to Work Related Health and Safety (WHS) Initiatives		25
Module 2. Analysis Workplace Policy and Procedures		30
Module 3. Perform Advanced Communication		40
Module 4.		40

Module	Learning Unit	Duration
Develop Advance Computer Application Skills		
Module 5. Manage Human Resource Services		20
Module 6. Develop Entrepreneurial Skills		30
Module 7. Monitor and Control Plant Operations	LU1. Monitor processing machines as per manufacturing order LU2. Ensure all control measures as per manufacturing order LU3. Respond to alarm, emergency preparedness and response procedures LU4. Update status of tools/equipment	60
Module 8. Complete Production Documentation	LU1. Maintain documentation as per manufacturing order/requirements LU2. Prepare reports and data base LU3. Maintain all records of food processing and packaging LU4. Maintain record of equipment and batches	60
Module 9. Perform Quality Assurance Measures for Food Products (microbiological, physical and chemical Measurements and Sensory Evaluation)	LU1. Apply basic microbiological methods to prove existence of microorganisms LU2. Use measures to reduce microbiological cross-contamination LU3. Perform proper weighing and mixing of ingredients LU4. Conduct basic measurements of different food samples LU5. Perform actual preparation of acid-base titration LU6. Perform sensory evaluation of food products LU7. Perform basic calculation	120

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Module-7

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Trainer's guidelines

Module 7: 072100986 Monitor and Control Plant Operations			
Learning Unit	Suggested Teaching/ Learning Activities	Delivery Context	Media
LU1: Monitor processing machines as per manufacturing order	<p>Enable learners to practice using the appropriate tools and equipment for monitoring processing machines as per manufacturing order in a controlled environment.</p> <p>Learners must be able to practice and develop their knowledge and skills relating to monitoring processing machines as per manufacturing order in an appropriate practical setting. Enable learners to perform the following:</p> <ul style="list-style-type: none"> • List down all machines which are required in achieving the production target as per manufacturing order. • Check all machines for their maintenance schedule, accessories, tools and spares etc. • Report deficiency if any and convey to concerned department. • Complete the log book after inspection <p>Ensure that learners have the opportunity to ask questions to support their understanding.</p>	<p>Food Lab Classroom Industrial visit</p>	<p>Charts Video clips Pamphlets Learner guide Handouts</p>

Module 7: 072100986 Monitor and Control Plant Operations			
Learning Unit	Suggested Teaching/ Learning Activities	Delivery Context	Media
LU2: Ensure all control measures as per manufacturing order	<p>Enable learners to practice using the appropriate tools and equipment for ensuring all control measures as per manufacturing order in a controlled environment.</p> <p>Learners must be able to practice and develop their knowledge and skills relating to ensuring all control measures as per manufacturing order in an appropriate practical setting.</p> <p>Enable the learners to verify or check safety valves, emergency shutdown switches, power off buttons, smoke detectors, fire extinguishers & availability of emergency exits etc.</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

Module 7: 072100986 Monitor and Control Plant Operations			
Learning Unit	Suggested Teaching/ Learning Activities	Delivery Context	Media
LU3: Respond to alarm, emergency preparedness and response procedures	<p>Enable learners to practice using the appropriate tools and equipment to respond the alarm, emergency preparedness and response procedures in a controlled environment.</p> <p>Learners must be able to practice and develop their knowledge and skills relating to respond the alarm, emergency preparedness and response procedures in an appropriate practical setting. Learners must be able to identify emergency exit, assembly point and evacuation plan.</p> <p>Enable the learners to perform first aid and artificial breathing in case of emergencies. They must know and apply response procedures in case of emergencies.</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

Module 7: 072100986 Monitor and Control Plant Operations			
Learning Unit	Suggested Teaching/ Learning Activities	Delivery Context	Media
LU4: Update status of tools/equipment	<p>Enable learners to practice using the appropriate tools and equipment for updating status of tools / equipment in a controlled environment.</p> <p>Learners must be able to practice and develop their knowledge and skills relating to updating status of tools / equipment in an appropriate practical setting.</p> <p>Enable the learners to update status of tools/equipment for repair, lubrication, calibration or change of parts on tags pasted on equipment.</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 8: 072100987 Production Documentation			
Learning Unit	Suggested Teaching/ Learning Activities	Delivery Context	Media
LU1: Maintain documentation as per manufacturing order/requirements	<p>Enable learners to practice using the appropriate tools and equipment for maintaining documentation as per manufacturing order / requirements in a controlled environment.</p> <p>Learners must be able to practice and develop their knowledge and skills relating to maintaining documentation as per manufacturing order / requirements in an appropriate practical setting. Ensure that learners have the opportunity to ask questions to support their understanding.</p> <p>Enable the learners to fill different log sheets to illustrate documentation procedure. The learners must be able to complete the log book.</p>	Food Lab Classroom Industrial visit	Video clips Pamphlets Learner guide Handouts Flip charts
LU2: Prepare reports and data base	<p>Enable learners to practice using the appropriate tools and equipment for preparing reports and data base in a controlled environment.</p> <p>Learners must be able to practice and develop their knowledge and skills relating to preparing reports and data base in an appropriate practical setting.</p> <p>Enable the learners to prepare reports in soft or hard copies and to compile data base. The learners must be able to understand and interpret various reports.</p> <p>Ensure that learners have the opportunity to ask questions to support their understanding.</p>	Food Lab Classroom Industrial visit	Specimens of reports. Video clips Pamphlets Learner guide Handouts Flip charts

Module 8: 072100987 Production Documentation			
Learning Unit	Suggested Teaching/ Learning Activities	Delivery Context	Media
LU3: Maintain all records of food processing and packaging	<p>Enable learners to practice using the appropriate tools and equipment for maintaining all records of food processing and packaging in a controlled environment.</p> <p>Learners must be able to practice and develop their knowledge and skills relating to maintaining all records of food processing and packaging in an appropriate practical setting. Ensure that learners have the opportunity to ask questions to support their understanding. Enable the learners for the following:</p> <ul style="list-style-type: none"> • Completing the log book • Filling the requisitions • Filling the reports of quality control • Maintaining the stock register 	Food Lab Classroom Industrial visit	Log book Requisition slips Video clips Pamphlets Learner guide Handouts Flip charts
LU4: Maintain record of equipment and batches	<p>Enable learners to practice using the appropriate tools and equipment for maintaining record of equipment and batches in a controlled environment.</p> <p>Learners must be able to practice and develop their knowledge and skills relating to maintaining record of equipment and batches in an appropriate practical setting. Learners must be able to trace record of batch by bar code system.</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

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Module-9

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Module 9:

072100988 Perform Quality Assurance Measures for Food Products (microbiological, physical and chemical Measurements and Sensory Evaluation)

Learning Unit	Suggested Teaching/ Learning Activities	Delivery Context	Media
LU1: Apply basic microbiological methods to prove existence of microorganisms	<p>Enable learners to practice using the appropriate tools and equipment for applying basic microbiological methods to prove existence of microorganisms in a controlled environment.</p> <p>Learners must be able to practice and develop their knowledge and skills relating to applying basic microbiological methods to prove existence of microorganisms in an appropriate practical setting. Ensure that learners have the opportunity to ask questions to support their understanding.</p> <p>The learners must be able to perform the following:</p> <ul style="list-style-type: none">• Checking total plate count• Swab testing• Coliform testing	Food Lab Classroom Industrial visit	Microscope Specimen slides Glass slides Culture media Video clips Pamphlets Learner guide Handouts Flip charts

**Module 9:
072100988 Perform Quality Assurance Measures for Food Products (microbiological, physical and chemical Measurements and Sensory Evaluation)**

Learning Unit	Suggested Teaching/ Learning Activities	Delivery Context	Media
<p>LU2: Use measures to reduce microbiological cross-contamination</p>	<p>Enable learners to practice using the appropriate tools and equipment for using measures to reduce microbiological cross-contamination in a controlled environment.</p> <p>Learners must be able to practice and develop their knowledge and skills relating to using measures to reduce microbiological cross-contamination in an appropriate practical setting. Ensure that learners have the opportunity to ask questions to support their understanding.</p> <p>Enable the learners to perform the following:</p> <ul style="list-style-type: none"> • Disinfecting by washing of hands • Sterilizing equipment and working surfaces • Using color coding system for cutting board. 	<p>Food Lab Classroom Industrial visit</p>	<p>Auto clave Sterilizer Video clips Pamphlets Learner guide Handouts Flip charts</p>

Module 9: 072100988 Perform Quality Assurance Measures for Food Products (microbiological, physical and chemical Measurements and Sensory Evaluation)			
Learning Unit	Suggested Teaching/ Learning Activities	Delivery Context	Media
LU3: Perform proper weighing and mixing of ingredients	<p>Enable learners to practice using the appropriate tools and equipment for performing proper weighing and mixing of ingredients in a controlled environment.</p> <p>Learners must be able to practice and develop their knowledge and skills relating to performing proper weighing and mixing of ingredients in an appropriate practical setting. Ensure that learners have the opportunity to ask questions to support their understanding.</p> <p>Enable the learners to perform the following:</p> <ul style="list-style-type: none"> • Weighing the ingredients on digital balance • Mixing ingredients on dry and wet basis 	<p>Food Lab</p> <p>Classroom</p> <p>Industrial visit</p>	<p>Analytical balance</p> <p>Video clips</p> <p>Pamphlets</p> <p>Learner guide</p> <p>Handouts</p> <p>Flip charts</p>

Module 9:

072100988 Perform Quality Assurance Measures for Food Products (microbiological, physical and chemical Measurements and Sensory Evaluation)

Learning Unit	Suggested Teaching/ Learning Activities	Delivery Context	Media
LU4: Conduct basic measurements of different food samples	<p>Enable learners to practice using the appropriate tools and equipment for conducting basic measurements of different food samples in a controlled environment.</p> <p>Learners must be able to practice and develop their knowledge and skills relating to conducting basic measurements of different food samples in an appropriate practical setting. Ensure that learners have the opportunity to ask questions to support their understanding. The learners must be able to perform the following:</p> <ul style="list-style-type: none">• Weighing by analytical balance• Using auto suckers, Burettes, Pipettes, Auto measures, Titration apparatus for basic measurements• Using colony counters• Using testing kits• Preparing solutions and reagents being used in food testing• Calibrating the equipment before testing.	Food Lab Classroom Industrial visit	Titration apparatus Reagent bottles Colony counter Video clips Pamphlets Learner guide Handouts Flip charts

Module 9:
072100988 Perform Quality Assurance Measures for Food Products (microbiological, physical and chemical Measurements and Sensory Evaluation)

Learning Unit	Suggested Teaching/ Learning Activities	Delivery Context	Media
LU5: Perform actual preparation of acid-base titration	<p>Enable learners to practice using the appropriate tools and equipment for performing actual preparation of acid-base titration in a controlled environment.</p> <p>Learners must be able to practice and develop their knowledge and skills relating to performing actual preparation of acid-base titration in an appropriate practical setting. Ensure that learners have the opportunity to ask questions to support their understanding.</p> <p>Enable the learners to perform the following:</p> <ul style="list-style-type: none"> • Preparing molar solution • Preparing standard solution • Preparing stock solution • Preparing molar solution • Preparing indicator solutions • Checking purity of reagents • Calibrating glassware 	Food Lab Classroom Industrial visit	Auto suckers Auto measures Sodium hydroxide Sulphuric acid Crystal violet dye Cylinders Beakers Pipettes Burets Reagent bottles Video clips Pamphlets Learner guide Handouts Flip charts

Module 9: 072100988 Perform Quality Assurance Measures for Food Products (microbiological, physical and chemical Measurements and Sensory Evaluation)			
Learning Unit	Suggested Teaching/ Learning Activities	Delivery Context	Media
LU6: Perform sensory evaluation of food products	<p>Enable learners to practice using the appropriate tools and equipment for performing the sensory evaluation of food products in a controlled environment.</p> <p>Learners must be able to practice and develop their knowledge and skills relating to performing the sensory evaluation of food products in an appropriate practical setting. Ensure that learners have the opportunity to ask questions to support their understanding.</p> <p>Enable the learners to perform the following:</p> <ul style="list-style-type: none"> • Perform differential test. • 9 Point Hedonic Scale Test • Perform triangle test • Perform comparison test 	Food Lab Classroom Industrial visit	Isolated cabin Video clips Pamphlets Learner guide Handouts Flip charts
LU7: Perform basic calculation	<p>Enable learners to practice using the appropriate tools and equipment for performing basic calculations in a controlled environment.</p> <p>Learners must be able to practice and develop their knowledge and skills relating to performing basic calculations in an appropriate practical setting. The learners must be able to calculate formulas on MS excel sheet.</p>	Food Lab Classroom Industrial visit	Computer Calculator Video clips Pamphlets Learner guide Handouts Flip charts

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 07

57. Identify the area at which all employees are gathered in case of emergency?
- A. Cafe
 - B. Production hall
 - C. Drain point
 - D. Assembly point
58. Which of the following is related to preparation of various reports, log books, files or folders for future record?
- A. Statistics
 - B. Maintenance
 - C. Documentation
 - D. Data analysis
59. Identify the book that does contain record of all activities and schedule to perform work according to target is:
- A. Stock book
 - B. Ledger book
 - C. Requisition book
 - D. Log book
60. What is the fastest method to share reports in an organization?
- A. Registered post
 - B. Courier service
 - C. Email
 - D. Messenger

Module 8

61. What is the method that has been approved to proceed a particular task according to universally recognized practice:
- A. SOP
 - B. CCP
 - C. CCL
 - D. TSS

62. What is the first test performed in quality inspection of processed foods?
- A. Biological
 - B. Brix
 - C. Visual
 - D. Chemical
63. What is the tool that is used to inform about emergency condition at plant?
- A. Telescope
 - B. Telegram
 - C. Siren Alarm
 - D. Telecom

Module 9

64. How Gram positive or negative bacteria are assessed?
- A. Staling
 - B. Staining
 - C. Inoculating
 - D. Culturing
65. What is liquid growth medium for microorganisms?
- A. Peptone agar
 - B. Broth
 - C. Blood Agar
 - D. Starch agar
66. What type of test is performed by Hedonic scale?
- A. Chemical test
 - B. Sensorial test
 - C. Biological Test
 - D. Biochemical test

KEY for MCQ's

Sr. #	Ans.	Sr. #	Ans.	Sr. #	Ans.	Sr. #	Ans.
57	D	60	C	63	C	65	B
58	C	61	A	64	B	66	B
59	D	62	C				

