**KNOWLEDGE COMPONENT: FACILITATOR FORMATIVE AND SUMMATIVE ASSESSMENT TOOLS AND MODEL ANSWERS: KNOWLEDGE MODULE 12: SAFETY, HEALTH, ENVIRONMENT, RISK AND QUALITY CONTROL (SHERQ)**

**KNOWLEDGE COMPONENT: FACILITATOR FORMATIVE AND SUMMATIVE ASSESSMENT TOOLS AND MODEL ANSWERS: KNOWLEDGE MODULE 12: SAFETY, HEALTH, ENVIRONMENT, RISK AND QUALITY CONTROL (SHERQ)**

**Occupational Certificate: Sugar Processing Controller**

**KNOWLEDGE COMPONENT: FACILITATOR FORMATIVE AND SUMMATIVE ASSESSMENT TOOLS AND MODEL ANSWERS**

**KNOWLEDGE MODULE 12: SAFETY, HEALTH, ENVIRONMENT, RISK AND QUALITY CONTROL (SHERQ)**

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**OCCUPATIONAL CERTIFICATE: SUGAR PROCESSING CONTROLLER**

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**TABLE OF CONTENTS**

[1. INTRODUCTION TO THE FACILITATOR ASSESSMENT TOOLKIT OF THE OCCUPATIONAL CERTIFICATE: SUGAR PROCESSING CONTROLLER 6](#_Toc9162246)

[2. KNOWLEDGE MODULE 12: SAFETY, HEALTH, ENVORONMENT, RISK AND QUALITY CONTROL (SHERQ) 7](#_Toc9162247)

[2.1 Knowledge Topic 1: Quality management (20%) 8](#_Toc9162248)

[2.2 Knowledge Topic 2: Occupational safety, health and environmental protection management concepts (25%) 11](#_Toc9162249)

[2.3 Knowledge topic 3: Controlling quality (20%) 16](#_Toc9162250)

[2.4 Knowledge topic 4: Environmental protection and pollution concepts (10%) 18](#_Toc9162251)

[2.5 Knowledge topic 5: Contamination control (10%) 20](#_Toc9162252)

[2.6 Knowledge topic 6: Risk control and safety practices (15%) 23](#_Toc9162253)

[3. CONCLUSION OF KNOWLEDGE MODULE 12: SAFETY, HEALTH, ENVIRONMENT, RISK AND QUALITY CONTROL (SHERQ) 27](#_Toc9162254)

[4. WRITTEN ASSESSMENT 28](#_Toc9162255)

[5. FINAL MARKS 35](#_Toc9162256)

1. INTRODUCTION TO THE FACILITATOR ASSESSMENT TOOLKIT OF THE OCCUPATIONAL CERTIFICATE: SUGAR PROCESSING CONTROLLER

Dear Facilitator

This Toolkit has been created to assist you to assess the Formative Learning Activities of learners undertaking the NQF 5 Occupational Certificate: Sugar Processing Controller Qualification.

During the programme, Learners must be directed to their Learning and Activities Guide to complete Learning Activities associated with each module of the Knowledge Component.

The time allocated to the Learning Activities is provided in the Facilitator’s Implementation Guide, this Facilitator Assessment Toolkit and Model Answers and the Learning and Activities Guide.

The marks allocated to each Learning Activity is provided in this Facilitator Assessment Toolkit and Model Answers and the Learning and Activities Guide.

**Instructions to be given to Learners**

* They must work individually to present the results of each Learning Activity in each of the Learning and Activities Guides (Workbooks).
* They must complete all the sections.
* They must use a black pen and ensure that they complete the questions in their own handwriting.
* The time provided to complete each activity is shown.
* The marks they will attain for each learning activity are shown in brackets.

1. KNOWLEDGE MODULE 12: SAFETY, HEALTH, ENVORONMENT, RISK AND QUALITY CONTROL (SHERQ)

**NQF LEVEL: 5**

**CREDITS: 8**

**PURPOSE OF THE KNOWLEDGE MODULE: The main focus of the learning in this knowledge module is to build an understanding of the safety, health, environment, risk and quality control (SHERQ) terms, concepts and established principles applied to first level operational managers.**

The learning will enable learners to demonstrate an understanding of:

* KM-12-KT01: Quality management (20%)
* KM-12-KT02: Occupational safety, health and environmental protection management concepts (25%)
* KM-12-KT03: Controlling quality (20%)
* KM-12-KT04: Environmental protection and pollution concepts (10%)
* KM-12-KT05: Contamination control (10%)
* KM-12-KT06: Risk control and safety practices (15%)

2.1 Knowledge Topic 1: Quality management (20%)

Topic elements to be covered include:

* KT0101 Quality management systems (HACCP, ISO)
* KT0102 Quality administration and reporting
* KT0103 Quality audit procedures

Internal Assessment Criteria and Weight

* IAC0101 Quality management systems can be defined and explained in terms of the purpose of the system, administrative and reporting requirements
* IAC0102 The auditing procedures and importance of maintaining quality certification status can be explained
* (Weight 20%)

**Learning activity 1.1: Individual Learning activity: 45 minutes (30 marks)**



**Learning Objective:** Quality management systems can be defined and explained in terms of the purpose of the system, administrative and reporting requirements

**Task:** Read each question carefully and write your answer in the space provided.

1. What does HACCP stand for? (2)

|  |
| --- |
| Hazard Analysis Critical Control Point |

2 Name seven principles of HACCP concepts (14)

|  |
| --- |
| Identifying any hazards that must be prevented, eliminated or reduced to acceptable levels; |
| Identifying the critical control points (CCP) at the step or steps at which control is essential to prevent or eliminate a hazard or to reduce it to acceptable levels; |
| Establishing critical limits at critical control points which separate acceptability from unacceptability for the prevention, elimination or reduction of identified hazards; |
| Establishing and implementing effective monitoring procedures at critical control points; |
| Establishing corrective actions when monitoring indicates that a critical control point is not under control; |
| Establishing procedures, which shall be carried out regularly, to verify that the measures outlined in subparagraphs (a) to (e) are working effectively; |
| Establishing documents and records commensurate with the nature and size of the food business to demonstrate the effective application of the measures outlined in subparagraphs (a) to (f). |

3. Illustrate the ISO cycle (5)

|  |
| --- |
|  |

4. Name five conditions that accidents can lead to (5)

|  |
| --- |
| Personal injuries |
| Damage to machinery or equipment |
| Damage to the product being manufactured |
| The death of an employee |
| Increased expenses |

5. Define QMI and explain what is it purpose (2)

|  |
| --- |
| QMI: Quality Management Information |
| It is designed to inform users about the strengths and limitations and it explains what the data is suitable to be used for. |

6. What is a quality audit procedure? (2)

|  |
| --- |
| It is the process of systematic examination of a quality system carried out by an internal or external quality auditor or an audit team. |

2.2 Knowledge Topic 2: Occupational safety, health and environmental protection management concepts (25%)

Topic elements to be covered include:

* KT0201 introduction the legislative framework that regulates workplace safety, health and environmental protection including appointments, compliance audits, repercussion and personal liability
* KT0202 General overview of statutory provisions of the Act including reporting of IOD, incident investigation and reporting, statutory registers
* KT0203 Incident investigation and reporting procedures
* KT0204 Risk management concepts and practices

Internal Assessment Criteria and Weight

* IAC0201 Responsibilities and delegated authorities of different appointments and management officials can be explained
* IAC0202 Statutory provisions that regulates the sugar milling industry can be listed and their impact explained
* (Weight 25%)

**Learning activity 2.1: Group Learning activity: 15 minutes (15 marks)**



**Learning Objective:** The concept of fairness as applied in industrial relations can be explained

**Task:** Form 4 groups. Do this by assigning everyone a number from 1 to 4. All the “ones” form one group, all the “twos” form the next group, all the “threes” form the third group and all the “fours” form the fourth group.

When you are in your groups, elect one person to be the group’s scribe (the person who will write down the points of your discussion), elect one person to be the group’s time-keeper (this person reminds the group that they are running out of time for the exercise) and one person who will be the group’s reporter (the person who will explain your findings to the class).

1. List and discuss three regulations or legislation Acts pertaining to Safety, Health and the Environment in the space provided below. (10)

|  |
| --- |
| **The Occupational Health and Safety Act:** The purpose of this Act is to provide for the health and safety of persons at work and for the health and safety of persons in connection with the use of plant and machinery; the protection of persons other than persons at work against hazards to health and safety arising out of or in connection with the activities of persons at work; to establish an advisory council for occupational health and safety; and to provide for matters connected therewith. |
| **The National Environmental Management Act:** The purpose of this Act is to provide for co-operative environmental governance by establishing principles for decision-making on matters affecting the environment, institutions that will promote co-operative governance and procedures for coordinating environmental functions exercised by organs of state; and to provide for matters connected therewith. |
| **The Compensation for Occupational Injuries and Diseases Act, Act 130 of 1993:** is the governing Act that deals with occupational injuries and diseases. It provides for medical cover and compensation of occupations injuries or diseases in all workplaces. |

2. How is the OHSA Act applied in the workplace? (5)

|  |
| --- |
| Making sure that the workplace is safe and convenient for working |
| Providing works with personal protective clothing’s |
| Sending workers to training |
| Doing induction orientation with new employee |
| Conducting regular on-site health and safety inspections |

**Learning activity 2.2: Group Learning activity: 30 minutes (10marks)**



**Learning Objective:** Statutory provision that regulates the sugar milling industry can be listed

**Task:** Form 4 groups. Do this by assigning everyone a number from 1 to 4. All the “ones” form one group, all the “twos” form the next group, all the “threes” form the third group and all the “fours” form the fourth group.

When you are in your groups, elect one person to be the group’s scribe (the person who will write down the points of your discussion), elect one person to be the group’s time-keeper (this person reminds the group that they are running out of time for the exercise) and one person who will be the group’s reporter (the person who will explain your findings to the class).

1. Use the copy of OHSA that you acquired at your nearest Labour Centre to study the rights of workers in the workplace and capture them in the space provided below. (10)

Answers will be based on the rights stipulated on the OHSA Act.

|  |
| --- |
| e.g. Workers have right to work under safe and healthy environment that is without risk |
| Right to refuse unsafe work |
| Right to participate in the workplace health and safety activities through the Health and Safety Committee (HSC) or as a worker health and safety representative. |
| The "right to know" about any hazards to which they may be exposed. |
| The "right to participate" to be part of the process of identifying and resolving health and safety concerns |

**Learning activity 2.3: Individual Learning activity: 30 minutes (20 marks)**



**Learning Objective:** Responsibilities and delegated authorities of different appointments and management officials can be explained

**Task:** Read each question carefully and write your answer in the space provided.

1. Define the following acronyms SHE and OHSA (2)

|  |
| --- |
| **SHE:** Safety, health and environment |
| **OHSA:** Occupational Health and Safety Act |

2. What is the aim of COIDA in the workplace? (4)

|  |
| --- |
| The aim of the COIDA is to provide for Compensation in the case of disablement caused by occupational injuries or diseases, sustained or contracted by employees in the course of their employment, or death resulting from such injuries or disease; and to provide for matters connected therewith. |
| The COIDA basically prevents employees covered by the Act from suing their employers for damages in terms of common law. |

3. Mention any three duties of the employer to ensure safety and good working environment. (6)

|  |
| --- |
| A duty to protect the health, safety and welfare of their employees and other people who might be affected by their business. |
| A duty to assess risks in the workplace. |
| A duty consult employees on health and safety issues |

4. Who undertakes investigation, when an accident or incident occur in the workplace (2)

|  |
| --- |
| The Health and Safety Executive inspectors or, |
| The Local authority Environmental Health Officers |

5. What are the steps to be followed when reporting and claiming from the Compensation Fund? (6)

|  |
| --- |
| **Fill in the forms:** Workers must report their injury or disease to their supervisor or employer immediately. Their employer must report it to the Compensation Fund and send in the necessary forms. |
| **Get forms from the doctor:** Workers must get the W.Cl.2 or W.Cl.1 form from their employer and take it to the doctor when they go for a visit. After the doctor has filled in the form, workers must take it back to their employer. Workers must take any other forms the doctor gives them to their employer. |
| |  | | --- | | **Keep in touch with the employer:** Workers must let their employers know when their address change and keep in touch with them. Workers’ money will be send to their employer’s address, so it is important that their employer can find them.If employers do not send in the forms or the claims takes long, workers must contact the nearest labour center and report it. | |

2.3 Knowledge topic 3: Controlling quality (20%)

Topic elements to be covered include:

* KT0301 Quality Control vs Quality Assurance
* KT0302 Key process stages or factors that could affect quality (Critical Control Points)
* KT0303 Quality indicators at critical stages
* KT0304 Causes of quality problems and remedial actions

Internal Assessment Criteria and Weight

* IAC0301 The control of quality can be described in terms of critical stages in the process, quality indicators, causes of typical quality problems and remedial actions
* (Weight 20%)

**Learning activity 3.1: Individual Learning activity: 15 minutes (10marks)**



**Learning Objective:** The control of quality can be described in terms of critical stages in the process, quality indicators, causes of typical quality problems and remedial actions

**Task:** Read each question carefully and write your answer in the space provided.

1. True or False, GMP stands for Good Manufacturing Practices. (2)

|  |
| --- |
| True |

2. There are several elements that are common to a GMP system. These elements cover areas of practice that require attention in the system. Name three. (6)

|  |
| --- |
| Hygiene: The manufacturing facility must maintain a clean and hygienic manufacturing area. |
| Controlled environmental conditions in order to prevent cross contamination of product from other extraneous particulate matter which may render the product unsafe for consumption. |
| Manufacturing processes are clearly defined and controlled. All critical processes are validated to ensure consistency and compliance with specifications. |
| Manufacturing processes are controlled, and any changes to the process are evaluated. Changes that have an impact on the quality of the product are validated as necessary. |
| Instructions and procedures are written in clear and unambiguous language. (Good Documentation Practices) |
| Operators are trained to carry out and document procedures. |
| Records are made, manually or by instruments, during manufacture that demonstrate that all the steps required by the defined procedures and instructions were in fact taken and that the quantity and quality of the product was as expected. Deviations are investigated and documented. |
| Records of manufacture (including distribution) that enable the complete history of a batch to be traced are retained in a comprehensible and accessible form. |
| The distribution of the product minimizes any risk to their quality. |
| A system is available for recalling any batch of product from sale or supply. |

3. Mention two basic control measures that can be used to eliminate hazards or risks? (2)

|  |
| --- |
| Personal protective equipment |
| Mechanical aids: providing mechanical aids to reduce the physical effort required by workers to do the job. |
| job design/redesign: altering the way a job is done or making changes to the work area, tools or equipment |

* 1. Knowledge topic 4: Environmental protection and pollution concepts (10%)

Topic elements to be covered include:

* KT0401 Environmental pollution concepts
* KT0402 Sources of and impact of contaminants on the natural environment specific to the sugar milling industry
* KT0403 General rules related to waste control and management
* KT0404 The impact of environmental pollution on natural resources, communities and the economy
* KT0405 Global warming and green production principles

Internal Assessment Criteria and Weight

* IAC0401 Measures to minimise the impact of a sugar mill on the environment can be explained
* (Weight 10%)

**Learning activity 4.1: Individual Learning activity: 30 minutes (12marks)**



**Learning Objective:** Measures to minimise the impact of a sugar mill on the environment can be explained

**Task:**

1**.** What are the two main environment concerns in the sugar mill? (2)

|  |
| --- |
| Water and Air pollution from waste by-products and effluent. |

2. What is the main source of air pollution from the sugar mill? And what are the major pollutants? (4)

|  |
| --- |
| The Bagasse fired boiler |
| **Major pollutants are:** Sulfer dioxide, nitrogen oxide and carbon monoxide. |

2. Describe the consequences or negative impact of the following environmental concerns (4)

• Excessive electricity consumption

• Excessive water use

|  |
| --- |
| **Excessive electricity consumption**   * Increased Carbon Footprint * Increased Risk of Climate Change * Reduction in Supply * Higher Energy Costs |
| **Excessive water use**   * Less fresh water for agricultural use which affects humans on a food scarcity level. * Affect the availability of safe water for human consumption |

3. What is the use of sugarcane waste (bagasse)? (2)

|  |
| --- |
| It is used as a biofuel for the production of heat, energy, and electricity, and in the manufacture of pulp and building materials. |

* 1. Knowledge topic 5: Contamination control (10%)

Topic elements to be covered include:

* KT0501 Pest control principles and practices
* KT0502 Product contamination and deterioration cause by equipment or facilities
* KT0503 Preventative actions for microbial and mycotoxin contamination

Internal Assessment Criteria and Weight

* IAC0501 Contamination control concepts can be explained from a food and product perspective
* (Weight 10%)

**Learning activity 5.1: Individual Learning activity: 1 hour (32marks)**



**Learning Objective:** Contamination control concepts can be explained from a food safety and product quality perspective

**Task:**

1. Describe the following signs of rodents’ activity in a workplace (4)

* Rodent droppings
* Gnawing teeth marks

|  |
| --- |
| **Rodent droppings:** These are most commonly found along the edge of walls, at the back of stairs and difficult to clean gaps. To check if droppings are of living rodents, remove the droppings and check the same space over the next few days for new droppings. If the rodents are still living in the area, new droppings will occur, as rodents always follow the same routes. |
| **Gnawing teeth marks:** Gnawing teeth marks: Rodents will eat just about anything and leave visible tooth marks on plastic containers and wooden structures. |

2. Name 3 sources of contamination (3)

|  |
| --- |
| The people present in the workplace and their clothing. |
| Dirty work premises and equipment. |
| Insects and vermin. |

3. Identify measures to control microbial contamination in sugarcane (10)

|  |
| --- |
| Clean harvested canes: Harvested cane should be free from mud and trash and should be loaded in a proper manner in the trucks so that no fractures or damages occur in sugarcane stalk which helps in preventing the further invasion sites for microorganisms. |
| No delay in clarification step after extraction: Clarification process should be immediately followed by extraction step. In this process, addition of lime takes place that increases the pH of the juice to about 8.0 and rapid heating to 80-100oC for destruction of microorganisms. This step in sugar processing reduces the growth and proliferation of microorganisms by 99.99%. Although the microorganisms are being killed in this process yet dextran and mesophilic or thermophilic spores were not killed (Chen and Chung, 1993). |
| Maintenance of high temperatures in diffuser: In diffusion plants, during sugar processing maintaining high temperature is an efficient way for controlling microorganisms. |
| Cleaning of the equipment and maintenance of hygiene: Sugar processing requires good hygiene for controlling microorganisms. Maintenance of this by adequate awareness for cleaning the equipment is required for avoiding the build-up of microorganisms like slime producers |

4. Name five species of fungi found in plants (5)

|  |
| --- |
| F. moniliforme |
| F. roseus, |
| F. tricinctum |
| and F. nivale |
| Genus Fusarium |

5. The prevention of mycotoxin contamination in agricultural commodities can be divided in three levels discuss them. (10)

|  |
| --- |
| **Primary prevention:** The step of prevention should be initially carried out before the fungal infestation and mycotoxin contamination. This level of prevention is the most important and effective plan for reducing fungal growth and mycotoxin production. Several practices have been recommended to keep the conditions unfavorable for any fungal growth. These include:   * development of fungal resistant varieties of growing plants; * control field infection by fungi of planting crops; * making schedule for suitable pre-harvest, harvest and post-harvest; * lowering moisture content of plant seeds, after post harvesting and during storage; * Store commodities at low temperature whenever possible; * Using fungicides and preservatives against fungal growth; * Control insect infestation in stored bulk grains with approved insecticides. |
| **Secondary prevention:** If the invasion of some fungi begins in commodities at early phase; this level of prevention will then be required. The existing toxigenic-fungi should be eliminated or its growth to be stopped to prevent further deterioration and mycotoxin contamination. Several measures are suggested as follows:   * Stop growth of infested fungi by re-drying the products; * Removal of contaminated seeds; * Inactivation or detoxification of mycotoxins contaminated; * Protect stored products from any conditions which favour continuing fungal growth. |
| **Tertiary prevention:** Once the products are heavily infested by toxic fungi, the primary and secondary preventions would not be then feasible. Any action would not be as effective as the practices mentioned above, since it will be quite late to completely stop toxic fungi and reduce their toxin formation. However, some measures should be done to prevent the transfer of fungi and their health hazardous toxins highly contaminated in products into our daily foods and environment. For example, peanut oil extracted from poor-graded peanut seeds always contains very high levels of aflatoxins and the oil-soluble toxin has to be eliminated by absorption and alkalinization during oilrefining process. Only a few practices are recommended:   * Complete destruction of the contaminated products; * Detoxification or destruction of mycotoxins to the minimal level. |

* 1. Knowledge topic 6: Risk control and safety practices (15%)

Topic elements to be covered include:

* KT0601 Risk control concepts
* KT0602 Equipment and mechanical system safety
* KT0603 Basic electrical safety
* KT0604 Emergency response
* KT0605 Dust explosion and spontaneous combustion risks
* KT0606 Fire risks and preventative measures
* KT0607 Access and movement control

Internal Assessment Criteria and Weight

* IAC0601 Risk control and safety practices common to the sugar milling industry can be explained and motivated
* (Weight 15%)

**Learning activity 5.1: Individual Learning activity: 1.5 hours (24marks)**



**Learning Objective:** Contamination control concepts can be explained from a food safety and product quality perspective

**Task:**

1. South Africa is experiencing an electricity supply crisis. Find a newspaper, magazine or internet article explaining the problem and ways in which the government and private sector are planning to resolve the crisis. Paste the article in the space below or insert it into your workbook here. Write a short discussion (300 to 450 words) on how you can assist to reduce your energy consumption, both at home and at work. (10)

The answer will be based on the article chosen

|  |
| --- |
| Paste your newspaper article here! |
| Write your discussion in the space below (or use an extra paper if required) |
|  |
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2. Differentiate between mechanical and non-mechanical hazards (6)

|  |
| --- |
| **Mechanical hazards:** Machinery and equipment have moving parts. The action of moving parts may have sufficient force in motion to cause injury to people.When assessing machinery and equipment for possible mechanical hazards, consider:   * machinery and equipment with moving parts that can be reached by people * machinery and equipment that can eject objects (parts, components, products or waste items) that may strike a person with sufficient force to cause harm * machinery and equipment with moving parts that can reach people, such as booms or mechanical appendages (arms) * mobile machinery and equipment, such as forklifts, pallet jacks, earthmoving equipment, operated in areas where people may gain access. |
| **Non-mechanical hazards:** Non-mechanical hazards associated with machinery and equipment can include harmful emissions, contained fluids or gas under pressure, chemicals and chemical by-products, electricity and noise, all of which can cause serious injury if not adequately controlled. In some cases, people exposed to these hazards may not show signs of injury or illness for years. Where people are at risk of injury due to harmful emissions from machinery and equipment, the emissions should be controlled at their source.  When assessing machinery and equipment for possible non-mechanical hazards, consider how machinery and equipment can affect the area (environment) around them. |

4. List four natural disasters. (4)

|  |
| --- |
| Floods |
| Hurricanes |
| Earthquakes |
| Tornadoes |

5. Define dust explosion and combustion (4)

|  |
| --- |
| A dust explosion is the rapid combustion of fine particles suspended in the air within an enclosed location. Dust explosions can occur where any dispersed powdered combustible material is present in high-enough concentrations in the atmosphere or other oxidizing gaseous medium, such as pure oxygen. |

1. CONCLUSION OF KNOWLEDGE MODULE 12: SAFETY, HEALTH, ENVIRONMENT, RISK AND QUALITY CONTROL (SHERQ)

Throughout this knowledge module you have been provided opportunities to complete formative learning activities. You have captured your results in this Learner Workbook.

The total marks for this Knowledge Module are as follows:

|  |  |  |
| --- | --- | --- |
| **Knowledge Module** | **Total Marks** | **Marks attained** |
| M-12-KT01: Quality management (20%) | 30 |  |
| KM-12-KT02: Occupational safety, health and environmental protection management concepts (25%) | 55 |  |
| KM-12-KT03: Controlling quality (20%) | 10 |  |
| KM-12-KT04: Environmental protection and pollution concepts (10%) | 12 |  |
| KM-12-KT05: Contamination control (10%) | 32 |  |
| KM-12-KT06: Risk control and safety practices (15%) | 24 |  |
| **Total Marks** | **163 marks** |  |

1. WRITTEN ASSESSMENT

**Candidate instruction:** Complete the following multiple-choice questionnaire by marking the most appropriate response with an x in the space provided.

|  |  |  |
| --- | --- | --- |
| **Scope of Assessment** | **Exit Level Outcome/s** | **Module/s** |
|  | 1. : Safety, Health, Environment, Risk and Quality control | **12** |
| **Alignment – Learning Outcome 1:** **Safety, Health, Environment, Risk and Quality control**  **Award four marks for selection of valid “x”. Four marks = Competent** | | |

|  |  |  |  |
| --- | --- | --- | --- |
| **12.1** | **What does safety in a workplace mean?** | | **Mark Allocation** |
| **a.** | 🞎 | Minding your own business |  |
| **b.** | 🞎 | Wearing PPE’s |  |
| **c.** | 🗷 | Accident prevention |  |
| **d.** | 🞎 | Fixing a broken machine |  |
| **e.** | 🞎 | Being negligent | **(4)** |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **12.2** | **How to ensure a safe working area?** | | | **Mark Allocation** | |
| **a.** | 🞎 | Keeping your own working station clean |  | |
| **b.** | 🞎 | Making sure all administration work is up to date |  | |
| **c.** | 🞎 | Living the tools and equipment laying around after working |  | |
| **d.** | 🞎 | By always wearing clean protective clothing |  | |
| **e.** | 🗷 | Maintaining good housekeeping in the workplace | **(4)** | |

|  |  |  |  |
| --- | --- | --- | --- |
| **12.3** | **What is the aim of HACCP?** | | **Mark Allocation** |
| **a.** | 🞎 | It specifies requirements for a food safety management system |  |
| **b.** | 🞎 | It provides cleaning and sanitation services, transportation, storage and distribution services for food companies |  |
| **c.** | 🞎 | It prevents food spoilage |  |
| **d.** | 🗷 | It enables potential consumer risks caused by food consumption to be identified and controlled using preventive measures. |  |
| **e.** | 🞎 | Cure food borne illnesses | **(4)** |

|  |  |  |  |
| --- | --- | --- | --- |
| **12.4** | **What is the purpose of the COIDA Act?** | | **Mark Allocation** |
| **a.** | 🞎 | Provides administration training for sugar industries |  |
| **b.** | 🞎 | To give effect to the right to fair labour practices |  |
| **c.** | 🞎 | To achieve equity in the workplace by promoting equal opportunity and fair treatment in employment |  |
| **d.** | 🗷 | To provide for Compensation in the case of disablement caused by occupational injuries or diseases, sustained or contracted by employees in the course of their employment, or death resulting from such injuries or disease; and to provide for matters connected therewith. |  |
| **e.** | 🞎 | Provide health and hygiene services in the workplace | **(4)** |

|  |  |  |  |
| --- | --- | --- | --- |
| **12.5** | **What are the employee’s duties with regards to workplace incident/accidents?** | | **Mark Allocation** |
| **a.** | 🞎 | An employee is under a duty to report within 3 days to the divisional inspector any incident in the workplace involving the death or injury |  |
| **b.** | 🞎 | Employees have a duty to co-operate with employers to enable them to fulfil their statutory duties under the Health and Safety at the workplace |  |
| **c.** | 🞎 | Help the injured employee |  |
| **d.** | 🗷 | All of the above |  |
| **e.** | 🞎 | None of the above | **(4)** |

|  |  |  |  |
| --- | --- | --- | --- |
| **12.6** | **The benefits of employers whom undertake accident investigation include?** | | **Mark Allocation** |
| **a.** | 🞎 | a better understanding of risk and provision of information for use in risk assessment |  |
| **b.** | 🞎 | prevention of accidents and incidents in the future |  |
| **c.** | 🞎 | a powerful vehicle for motivating organisational learning and activating cultural change |  |
| **d.** | 🞎 | a useful means of demonstrating the status of safety management in an organisation which in turn can be used to assist in litigation claims and developing arguments for lowering insurance premiums |  |
| **e.** | 🗷 | All of the above | **(4)** |

|  |  |  |  |
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| **12.7** | **Define Quality Assurance** | | **Mark Allocation** |
| **a.** | 🞎 | Ensuring clean and hygienic area |  |
| **b.** | 🗷 | It is the prevention of problems |  |
| **c.** | 🞎 | Assigning duties to sub-ordinates |  |
| **d.** | 🞎 | The process of detecting any problem that occurs |  |
| **e.** | 🞎 | None of the above | **(4)** |

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| **12.8** | **What are the major pollutants that cause air pollution in the sugar industry?** | | **Mark Allocation** |
| **a.** | 🞎 | carbon monoxide |  |
| **b.** | 🞎 | Sulfer dioxide, |  |
| **c.** | 🞎 | nitrogen oxide |  |
| **d.** | 🗷 | All of the above |  |
| **e.** | 🞎 | None of the above | **(4)** |

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| **12.9** | **How does a sugar mill manage waste?** | | **Mark Allocation** |
| **a.** | 🞎 | Determining the origin of waste streams; |  |
| **b.** | 🞎 | Classifying waste into categories, |  |
| **c.** | 🞎 | Implementation of on-site waste management systems |  |
| **d.** | 🞎 | Determining the origin of waste streams; |  |
| **e.** | 🗷 | All of the above | **(4)** |

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| **12.10** | **When is the primary prevention of mycotoxin done** | | **Mark Allocation** |
| **a.** | 🞎 | If the invasion of some fungi begins in commodities at early phase |  |
| **b.** | 🞎 | Once the products are heavily infested by toxic fungi |  |
| **c.** | 🗷 | before the fungal infestation and mycotoxin contamination |  |
| **d.** | 🞎 | All of the above |  |
| **e.** | 🞎 | None of the above | **(4)** |

**Award one mark for selection of valid “T/F”. One mark = Competent**

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| **12.11** | **True or False: The Occupational Health and Safety Act aims to** | | **Mark Allocation** |
| **a.** | ⓕ | Prevent pollution and ecological degradation |  |
| **b.** | ⓣ | Reduce incidents and accidents; |  |
| **c.** | ⓣ | Protect the environment for workers and their communities; |  |
| **d.** | ⓕ | Make sure that workers get a fair pay |  |
| **e.** | ⓣ | Produce effective communication between workers, employers and communities. | **(5)** |

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| **12.12** | **The ISC Cycle includes the following actions** | | **Mark Allocation** |
| **a.** | ⓣ | Plan |  |
| **b.** | ⓣ | Do |  |
| **c.** | ⓣ | Check |  |
| **d.** | ⓣ | Act |  |
| **e.** | ⓣ | Evaluate | **(5)** |

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| **12.13** | **The following are aims of the National Environmental Management Act** | | **Mark Allocation** |
| **a.** | ⓣ | Sustainable development must be ensured for future generations; |  |
| **b.** | ⓕ | Ensure equality at a work place |  |
| **c.** | ⓣ | Pollution and ecological degradation is prevented |  |
| **d.** | ⓕ | Aims to realise the rights set out in the Constitution by providing a framework for a structured and quality uniform health |  |
| **e.** | ⓣ | Everyone has the right to an environment that is not harmful to his or her health or wellbeing; | **(5)** |

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| **12.14** | **How to report an accident** | | **Mark Allocation** |
| **a.** | ⓣ | Explain where it happened (location) |  |
| **b.** | ⓣ | How it happened |  |
| **c.** | ⓣ | When it happened (time/date) |  |
| **d.** | ⓣ | Injuries/death |  |
| **e.** | ⓣ | What caused the accident | **(5)** |

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| **12.15** | **True or False; the following steps are investigation guides?** | | **Mark Allocation** |
| **a.** | ⓣ | Gathering information. |  |
| **b.** | ⓕ | Not conducting a investigation |  |
| **c.** | ⓣ | Analysing information. |  |
| **d.** | ⓣ | Identifying risk control measures. |  |
| **e.** | ⓣ | Producing and implementing an action plan. | **(5)** |

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| **12.16** | **True or False; Hazards are classified in the following types?** | | **Mark Allocation** |
| **a.** | ⓣ | Physical |  |
| **b.** | ⓣ | Chemical |  |
| **c.** | ⓣ | Biological |  |
| **d.** | ⓣ | Radiation |  |
| **e.** | ⓣ | Ergonomic | **(5)** |

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| **12.17** | **True or False the following are sources of contamination in the sugar mill?** | | **Mark Allocation** |
| **a.** | ⓣ | Sugarcane |  |
| **b.** | ⓣ | Soil |  |
| **c.** | ⓣ | Handlers |  |
| **d.** | ⓣ | Transportation |  |
| **e.** | ⓣ | Debris | **(5)** |

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| **12.18** | **Waste management involves** | | **Mark Allocation** |
| **a.** | ⓣ | Waste minimisation |  |
| **b.** | ⓕ | Inappropriate disposal |  |
| **c.** | ⓣ | Reduce |  |
| **d.** | ⓣ | Re-use |  |
| **e.** | ⓣ | Recycle | **(5)** |

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| **12.19** | **The following is done to control invasion of microorganisms in sugarcane** | | **Mark Allocation** |
| **a.** | ⓕ | Do not maintain high temperatures in diffuser |  |
| **b.** | ⓣ | Clean harvested canes |  |
| **c.** | ⓣ | Cleaning of the equipment and maintenance of hygiene |  |
| **d.** | ⓕ | Conduction unhealthy practices |  |
| **e.** | ⓣ | No delay in clarification step after extraction: | **(5)** |

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| **12.20** | **True or False: Risk Management process involves** | | **Mark Allocation** |
| **a.** | ⓣ | Identifying hazards |  |
| **b.** | ⓣ | Assessing risk |  |
| **c.** | ⓣ | Determining controls |  |
| **d.** | ⓣ | Implementing controls |  |
| **e.** | ⓣ | Review and Audit | **(5)** |

1. FINAL MARKS

**TOTAL MARKS: 90**

**PASS MARK: 72**

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| **LEARNER MARKS** |  |
| **PERCENTAGE** |  |
| **ASSESSOR SIGNATURE:** | |