

EXTERNAL INTEGRATED SUMMATIVE ASSESSMENT

CANDIDATE INFORMATION

SURNAME													
NAMES													
ID NUMBER													
EISA REGISTRATION NUMBER													
ASSESSMENT CENTRE													
ASSESSMENT CENTRE ACCREDITATION NUMBER													

QUALIFICATION INFORMATION

QUALIFICATION TITLE	INTERMEDIATE OCCUPATIONAL CERTIFICATE: LIQUID DAIRY RECEPTION OPERATOR
SAQA ID	121154
NQF LEVEL	3
CREDITS	123
DURATION	2 hours
TOTAL MARKS	100
PASS MARK	70
DATE OF EISA	30 March 2026

GENERAL EISA RULES

- a) Candidates are **ONLY** allowed to use the supplied **EISA BOOKLETS**.
- b) Candidates can **ONLY** use a **BLACK PEN** for their answers.
- c) Candidates to ensure that their **NAMES, SURNAMES** and **EISA registration numbers** appear on the front of their EISA booklet.
- d) This is a closed-book examination. Therefore, no other materials or belongings are to be brought into the assessment centre. Should you bring any other materials or belongings into the assessment centre, you will be required to leave such at the front of the assessment centre examination room. The assessment centre will not be held liable for any loss or damage to property brought into the assessment centre examination room.
- e) All EISA booklets must be handed back to the invigilator intact. No paper may be torn off from the EISA booklet. The removal of EISA booklets from the examination room is prohibited.
- f) Candidates may use a calculator in this EISA.
- g) Unless this is an online examination where access to a computer will be made available to you, the use of any communication devices, including smart watches, cell phones, tablets, iPads, headphones and laptops, are prohibited.
- h) All cell phones are to be switched off for the duration of the EISA.
- i) The invigilator will not assist you with the explanation of questions related to the EISA.
- j) Candidates are prohibited from conversing in any manner with other students.
- k) Candidates may not leave the examination venue within one hour of the start of the examination and in the last 10 minutes of the allotted examination period.
- l) Candidates who are found to be disruptive and unruly in the assessment centre will be requested to leave the assessment centre by the invigilator.

**I HEREBY CONFIRM THAT I HAVE READ THE ABOVE EISA RULES AND
DECLARE THAT I UNDERSTAND AND ACCEPT THE RULES**

CANDIDATE SIGNATURE

INSTRUCTIONS TO CANDIDATES

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QUESTION 1: PREPARATIONS FOR RECEIVING RAW MATERIAL (52 Marks)

You are the lead operator at a busy dairy reception terminal. A bulk milk tanker containing 28,000 litres of raw whole milk has arrived for intake. The production schedule dictates that this volume must be transferred into **Storage Silo 04**, which has been tagged as "Clean" by the previous shift. Your responsibility is to prepare the environment, verify the equipment readiness, and ensure that all safety barriers are in place to prevent chemical contamination or physical spills during the high-volume transfer.

1.1 SYSTEM AND AREA PREPARATION (20 Marks)

1.1.1 **List** eight (8) sequential steps required to prepare the physical reception bay area and the automated pumps for operation according to operational standards. (8)

1.1.2 **State** the specific manual or automated valve configurations required to direct the flow to **Silo 04** and **explain** how the "Double Block and Bleed" principle is applied to ensure that cleaning chemicals cannot enter the product line during intake. (12)

1.2 FOOD SAFETY AND OHS IMPLEMENTATION (16 Marks)

1.2.1 **State** how the following practices are implemented during your intake preparations to ensure product safety and worker protection:

a) List two (2) GMP rules for operators that operators must follow when handling intake couplings. (4)

b) Describe the procedure for sanitizing a tanker discharge valve and the intake hose coupling. (4)

c) Explain how to verify the "Clean Status" of Silo 04 using the automated control system or manual log. (4)

d) List two (2) safety checks to ensure the intake pump and mobile electrical cables are safe for use on a wet floor. (4)

2.1.2 **List** three (3) concepts of interpersonal relations that help maintain a professional environment when dealing with external tanker drivers. (5)

2.1.3 **Explain** how accurate logbook entries (business administration) impact the financial efficiency of the dairy in relation to farmer payments and batch traceability. (5)

2.2 FOOD SAFETY TERMINOLOGY (8 Marks)

2.2.1 **Define** the following terms in the context of liquid dairy reception: (8)

a) Critical Control Point (CCP)

b) Quality Assurance (QA)

c) Contamination

d) Hygiene

2.3 QUALITY CONTROL SYSTEMS (10 Marks)

2.3.1 Identify and **describe** five (5) technical systems (e.g., inline filters, automated flow-division valves, and sampling ports) used to maintain effective quality control during bulk transfer. (10)

2.4 RAW MATERIAL ANALYSIS AND EVALUATION (16 Marks)

2.4.1 **State** the industry standard temperature specification for raw milk at intake and **explain** the action to be taken if a tanker exceeds the 7°C limit. (4)

2.4.2 **List** two (2) factors explaining why receiving milk with high acidity (souring) is detrimental to the shelf-life of the final packaged product. (4)

2.4.3 **State** why the rigorous management of non-conformances is essential for maintaining legal compliance with South African dairy regulations (e.g., R155). (4)

2.4.4 **List** four (4) specific types of records (e.g., delivery notes or temperature logs) required to prove batch conformance at the point of reception. (4)

TOTAL: 100 MARKS

QUESTIONS	MARKS
Question 1	52
Question 2	48
	TOTAL: 100



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NQF LEVEL	3
CREDITS	123
DURATION	2 hours
TOTAL MARKS	100
PASS MARK	50
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QUESTION 1: PREPARATIONS FOR RECEIVING RAW MATERIAL (52 Marks)

1.1 SYSTEM AND AREA PREPARATION (20 Marks)

- **1.1.1 Sequential Preparation Steps (8 Marks)** *Any 8 points for 1 mark each:*
 1. Clear the reception bay of any physical debris, standing water, or chemical puddles.
 2. Visually inspect floor drains to ensure they are free-flowing and not blocked.
 3. Verify that all intake hoses and couplings are physically intact (no cracks or perishing).
 4. Check pump seals and gaskets for signs of wear or leakage.

5. Confirm the "Clean/Ready" status of Silo 04 via the HMI control panel or manual tag.
6. Ensure the de-aerator vessel is clean and the seal is correctly seated.
7. Assemble and inspect the inline filter mesh to ensure it is the correct micron size and clean.
8. Zero the automated flow meter or volume meter for the new batch.
9. Place safety wheel chocks for the incoming tanker.
10. Verify that electrical grounding/earthing cables are ready for connection.

- **1.1.2 Valve Configuration and Double Block Principle (12 Marks) * Valve Settings (6 Marks):**

- * Manual or automated selection of the path specifically to Silo 04 (2).

- * Locking out or closing valves for Silos 01, 02, 03, and 05 to prevent cross-mixing (2).

- * Ensuring the Silo 04 CIP return valve is closed to prevent milk entering the chemical tank (2).

- **Double Block and Bleed Principle (6 Marks):**

- The principle requires two closed valves between the product line and the chemical line (3).
- A "bleed" point (drain) is opened between these two valves to ensure that if a seal fails, the fluid drains to the floor rather than into the product line (3).

1.2 FOOD SAFETY AND OHS IMPLEMENTATION (16 Marks)

- **a) Personal Hygiene (4 Marks):** 1. Mandatory hand-sanitizing before handling food-contact fittings; 2. Wearing clean, dedicated dairy whites/PPE that has not been used in raw milk farming areas.
- **b) Sanitisation (4 Marks):** Dipping or spraying the tanker discharge valve and intake coupling in an approved food-grade sanitizer (e.g., Peracetic Acid or Chlorine solution) (2) for the minimum validated contact time (usually 2–5 minutes) (2).
- **c) System Verification (4 Marks):** Reviewing the Silo 04 CIP Log to confirm the final rinse reached target temperature and that the conductivity sensor reading indicates zero chemical residue.
- **d) OHS Inspections (4 Marks):** 1. Checking that the drive motor guard is secure; 2. Verifying that all mobile electrical cables are elevated off the wet floor using hooks or stands.

1.3 NON-CONFORMANCE MANAGEMENT (16 Marks)

- **1.3.1 ECR - Management Steps (4 Marks per stage):**

- **Isolation:** Immediately stop the preparation process and do not allow the tanker to connect (4).
- **Notification:** Verbally report the specific non-conformance (e.g., leaking de-aerator or failed CIP) to the Reception Supervisor and the QC Lab (4).
- **Corrective Action:** Replace the perished gasket with a food-grade spare or initiate a "re-clean" cycle for Silo 04 if residue was detected (4).
- **Documentation:** Accurately complete the Non-Conformance Report (NCR) log, detailing the batch number, tanker ID, the nature of the fault, and the final resolution (4).

QUESTION 2: COMMUNICATION, QUALITY, AND ANALYSIS (48 Marks)

2.1 BUSINESS CONCEPTS AND COMMUNICATION (14 Marks)

- **2.1.1 Comm Reasons (4 Marks):** 1. To prevent the downstream processing of contaminated milk; 2. To allow the production manager to adjust the shift schedule or source alternative raw material.
- **2.1.2 Interpersonal Relations (5 Marks):** 1. Using a professional and objective tone; 2. Clearly explaining the laboratory standard that was violated; 3. Active listening when the driver provides details on the milk source or transport conditions.
- **2.1.3 Admin/Financial Impact (5 Marks):** Accurate logbook entries provide the legal "Backward Traceability" required for farmer payments (2) and protect the factory from massive financial losses by limiting the scope of a product recall should a safety issue arise (3).

2.2 FOOD SAFETY TERMINOLOGY (8 Marks)

- **a) CCP:** A point (e.g., intake filtering) where control can be applied to prevent or eliminate a food safety hazard. (2)
- **b) QA:** Proactive activities designed to ensure that the reception process result will meet standards. (2)
- **c) Contamination:** The introduction or presence of an unwanted biological, chemical, or physical agent in the milk. (2)
- **d) Hygiene:** Conditions and practices that help to maintain health and prevent the spread of disease. (2)

2.3 QUALITY CONTROL SYSTEMS (10 Marks)

- **2.3.1 ECR - Technical Systems (Any 3 systems for 10 Marks):**
 - **Inline Filters:** Mesh barriers used to physically remove large hazards like hair, straw, and dirt at the point of intake.
 - **Automated Flow-Diversion Valves:** Systems that automatically send milk back to the tanker or a waste tank if the temperature exceeds the critical limit (e.g., $>7^{\circ}\text{C}$).
 - **Sampling Ports:** Specialized sanitary points that allow the operator to draw a representative sample for the lab without introducing environmental air or bacteria.

2.4 RAW MATERIAL ANALYSIS AND EVALUATION (16 Marks)

- **2.4.1 Temperature (4 Marks):** The industry standard is $\leq 7^{\circ}\text{C}$ (accept $\leq 5^{\circ}\text{C}$ depending on factory spec). A reading of 8.5°C requires immediate diversion to a lower-grade silo (e.g., for animal feed) or total rejection of the tanker.
- **2.4.2 Acidity (4 Marks):** 1. High acidity (souring) causes the milk to curdle/burn onto pasteurizer plates (fouling); 2. High acidity results in graininess and poor shelf-life in final fermented or fresh products.
- **2.4.3 Legal (4 Marks):** Managing non-conformances according to R155 is a legal mandate to protect public health and ensure the facility maintains its certificate of acceptability to process food.
- **2.4.4 Records (4 Marks):** 1. Tanker Intake Log; 2. Delivery Note; 3. Lab Release Form; 4. Silo CIP Record (Verification of Clean status).

END OF MEMORANDUM

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16. Ensure the de-aerator vessel is clean and the seal is correctly seated.
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