



# higher education & training

Department:  
Higher Education and Training  
**REPUBLIC OF SOUTH AFRICA**

## **MARKING GUIDELINE**

**NATIONAL CERTIFICATE**

**SANITATION AND SAFETY N4**

**22 November 2024**

**This marking guideline consists of 10 pages.**

## SECTION A

### QUESTION 1

- 1.1 A✓
- 1.2 B✓
- 1.3 B✓
- 1.4 C✓
- 1.5 B✓
- 1.6 A✓
- 1.7 A✓
- 1.8 C✓
- 1.9 C✓
- 1.10 A✓

(10 × 1) [10]

### QUESTION 2

- 2.1 False✓
- 2.2 False✓
- 2.3 False✓
- 2.4 True✓
- 2.5 True✓
- 2.6 True✓
- 2.7 False✓
- 2.8 True✓
- 2.9 True✓
- 2.10 True✓

(10 × 1) [10]

### QUESTION 3

- 3.1 B,✓ C✓
- 3.2 E,✓ K✓
- 3.3 G,✓ A✓
- 3.4 F,✓ I✓
- 3.5 D,✓ J✓

(5 × 2) [10]

### QUESTION 4

- 4.1 fungus✓
- 4.2 carbohydrates✓
- 4.3 Meat pies✓
- 4.4 neutral✓
- 4.5 The nose and mouth✓
- 4.6 Scrombroid✓
- 4.7 5✓
- 4.8 binary fission✓
- 4.9 hallucinogen✓
- 4.10 an electrical apparatus✓

(10 × 1)

## QUESTION 5

- 5.1 Neutrophile✓
- 5.2 Facultative organism✓
- 5.3 Disinfectant✓
- 5.4 Saprophytes✓
- 5.5 Photosynthesis✓
- 5.6 Antibody✓
- 5.7 CCMA/Commission for conciliation, mediation and arbitration✓
- 5.8 Caffeine✓
- 5.9 Amphetamine✓
- 5.10 Drug abuse✓

(10 × 1) [10]

**TOTAL SECTION A: 50**

## SECTION B

### QUESTION 6

- 6.1 6.1.1 **Sterilisation:**  
Any process that destroys/kills or removes all infectious organisms/microbial life,✓ including endospores and viruses.✓ (2)
- 6.1.2 **Accident:**  
Any unplanned and uncontrolled occurrence/situation✓ where the action or reaction of a person can lead to an injury of personnel or other persons involved.✓ (2)
- 6.1.3 **Food hygiene:**  
Cleanliness✓ and the microbiological, chemical and physical wholesomeness of food.✓ (2)
- 6.1.4 **Antibiotic:**  
A substance/metabolic product, produced in the normal growth of one micro-organism✓ which suppresses/inhibits or kills the growth of other micro-organisms e.g. penicillin. Some are used in chemotherapy.✓ (2)
- 6.1.5 **Micro-organism:**  
A general term used to describe a very small organism (form of life) whether it be human or plant matter, which consists of one or more than one cell.✓ It is a collective name for a variety of invisible organisms - Individually, these living things are too small to be seen with the naked eye.✓ (2)
- 6.2 6.2.1 Anti-microbial agent✓ (1)
- 6.2.2 Tubercle bacilli/tuberculosis✓

- 6.2.3 Human immunodeficiency virus✓ (1)
- 6.2.4 Occupational Health and Safety Act✓ (1)
- 6.2.5 South African National Tuberculosis Association✓ (1)
- 6.3
- Good bactericidal activity✓
  - Low toxicity to human beings✓
  - Must not affect the colour, odour or flavour of food processed✓
  - Cheap, effective and convenient✓
  - Must be easy to dispense✓
  - Must not adversely affect the operator✓
  - It must not damage equipment treated with it – that is, it must be suitable for the type of material of which the equipment is constructed✓
  - Method of application should be user-friendly and require little skill✓
- (Any 6 × 1) (6)
- 6.4
- Pre-cleaning✓ – Clean with water to remove loose soil.✓
  - Main cleaning✓ – Removal of all residual dirt by a suitable detergent.✓
  - Inter-rinse✓ – Removal and rinsing away of all detergent and soil.✓
  - Sanitization✓ – The destruction of most micro-organisms by application of chemicals with and without heat.✓
  - Final rinse✓ – Removal of sanitising chemicals from the system with water of suitable microbiological quality.✓
- (5 × 2) (10)
- 6.5
- Select the correct knife for the task at hand e.g. size and type.✓
  - Keep knives sharp at all times.✓
  - Place knives flat on the table, not on the edge of the table.✓
  - Do not play games with knives.✓
  - When carrying a knife, the sharp point must be facing downwards.✓
  - Handles should be free from grease, ensuring a firm grip.✓
  - Grip the handle firmly.✓
  - Knives should be wiped clean with the edge away from the hands.✓
  - Cut downwards, rather than to the side.✓
  - Keep your fingers out of the way when cutting.✓
  - Always cut away from the body.✓
  - Do not put/leave a knife in a washing-up sink.✓
  - Do not leave sharp knives loose in a drawer.✓
  - Do not try to catch a dropping knife.✓
  - Pick the knife up by the handle.✓
- (Any 6 × 1) (6)
- 6.6
- Starving✓ – Remove the fuel, and the fire will die off✓
  - Smothering✓ – Remove the air, and the fire will not last and will die off✓
  - Cooling✓ – Remove the heat by using water✓
- (3 × 2) (6)
- 6.7
- 6.7.1 Depressant✓ (1)

- 6.7.2
- Cancer – increases the risk of cancer in the liver, pancreas, rectum, breast, mouth, pharynx, larynx and oesophagus.✓
  - Liver disease – causes fatty liver, alcoholic hepatitis and cirrhosis.✓
  - Heart disease – raises blood pressure, blood lipids and the risk of stroke and heart disease in heavy drinkers. Heart disease is generally lower in light to moderate drinkers.✓
  - Heart muscles which receive the circulating alcohol in the blood may weaken after prolonged heavy drinking.✓
  - Kidney disease – enlarges the kidneys, alters hormone functions, and increases the risk of kidney failure.✓
  - Pancreas malfunctioning – alcohol reduces the amount of digestive enzymes secreted by the pancreas.✓
  - Stomach – alcohol can damage the cells lining the stomach and small intestine.✓
  - Arthritis – increases risk of arthritis and muscle atrophy.✓
  - Blood – a common form of anaemia is recognised as being caused by alcohol.✓
  - Brain – some cells may be destroyed permanently.✓
  - Eyes – eyesight may be affected.✓
  - Physiological problems - causes depression, anxiety and insomnia.✓
  - Malnutrition – increases the risk of protein-energy malnutrition, low intakes of protein, calcium, iron, vitamin A, vitamin C, thiamine, vitamin B6 and riboflavin, and impaired absorption of calcium, phosphorus, vitamin D and zinc.✓

(Any 6 × 1)

**(Full sentence – question states explain)**

(6)  
[50]

## QUESTION 7

- 7.1
- Using the same utensils to serve contaminated foods✓
  - Careless about personal hygiene✓
  - Leaving skin infections and cuts uncovered✓
  - Coughing, sneezing and spitting while preparing food✓
  - Incomplete cleaning of food utensils✓
  - Pests, e.g. houseflies and cockroaches✓
  - Rodents such as rats and mice✓
  - Household pets such as dogs, cats and hamsters✓
  - Infected or diseased cattle and dairy cows✓
  - Contaminated water supply✓
  - Soil and dust✓

(Any 7 × 1) (7)

- 7.2      7.2.1      **Eggs:**
- Keep refrigerated in the packing trays.✓
  - Eggs should be stored at a temperature between 0-5°C.✓
  - Store eggs blunt end upwards.✓
  - Do not store with strong smelling foods as it absorbs the smell.✓
  - Do not wash the eggs before storage, as it removes the natural protective coating.✓
  - Whole eggs cannot be frozen, but white and yolk can be frozen separately.✓
- (Any 5 × 1)      (5)
- 7.2.2      **Canned products:**
- Keep track of expiry dates.✓
  - Canned foods usually lasts for two years.✓
  - Acidic canned foods (tomatoes) may only go to about one to one and a half year.✓
  - Store in a dry and cool ( $\pm 9^{\circ}\text{C}$  to  $10^{\circ}\text{C}$ ) place.✓
  - Never store cans near heating pipes and stoves – heat can cause it to expand – likewise extreme cool places can cause cans to freeze.✓
  - Any cans that have decolourisation or rust, regardless of the colour/taste of the product in the inside.✓
  - Dented cans, which do not leak are safe to use.✓
  - Blown cans – those with bulges at either end must not be used.✓
- (Any 5 × 1)      (5)
- 7.3      • Pests cause food poisoning✓
- Pests cause food spoilage✓
- Pests cause food-borne diseases✓
- Pests cause contamination✓
- (4)
- 7.4      7.4.1      No✓
- (1)
- 7.4.2      • Being well with no symptoms or disease, but testing positive✓
- Mild disease – many develop flu-like symptoms✓
- Severe illness – symptomatic phase✓
- Final death✓
- (4)

- 7.4.3
- Fever✓
  - Chills✓
  - Headache✓
  - Muscle pain✓
  - Joint pain✓
  - Sore throat✓
  - Swollen lymph nodes✓
  - Night sweats✓
  - Rapid weight loss✓
  - **Diarrhoea✓**
  - **Poor appetite✓**
  - **Fatigue✓**
  - **Shortness of breath✓**
  - **Dry cough✓**
  - **Skin rashes/infection✓**
  - **Swollen tongue✓**
  - **Diminishing dental health✓**
  - **Reactivating of TB✓**
  - **Herpes – mouth sores/genital✓**
  - **Pain when swallowing✓**
- (Any 10 × 1) (10)
- 7.4.4
- Sexual transmission✓
  - Transmission through blood✓
  - Transmission through pregnancy; prenatal or post-natal – mother with HIV to baby✓
- (3)
- 7.5
- All big cuts, sores and scalds should be disinfected and covered with a clean, sterile waterproof dressing.✓
  - If this wound should be on the food handler's finger or hand, a glove should be used to cover the affected area.✓
  - This gloved hand must also be washed and disinfected in the same manner as the other hand.✓
  - In the case of smaller wounds e.g. small cuts or scratches, they should also be disinfected and then covered with waterproof plasters - Coloured plasters can be seen more easily when they become dislodged and fall into food during preparation and can be identified more easily.✓
  - Make sure that you report any injury to the supervisor.✓
- (5)
- 7.6
- Washable✓
  - Suitable colour (white) ✓
  - Light in weight (comfortable) ✓
  - Well-fitted✓
  - Strong and in good condition✓
  - Absorbent (natural fibre)✓
- (6)

[50]

## QUESTION 8

- 8.1
- Wash your hands for at least 30–40 seconds.✓
  - Use an antibacterial liquid soap which is kept in a clean soap dispenser.✓
  - Wet hands and forearms with water as hot as the skin can bear.✓
  - Apply the soap to the palm of the hand and rub over the hand, wrist and forearms as well as between the fingers.✓
  - Rinse the hands and forearms thoroughly with hot running water.✓
  - Dry the hands with a disposable paper towel or blow dryers installed for this purpose. Start at the fingertips and finish with the elbows.✓
  - If your nails aren't clean, use a nail brush to clean them. Brush under the nails if they are long.✓
  - Prevent chapped and dry skin by drying hands thoroughly after they have been washed.✓
  - The use of hand cream when not on duty will also help. Food handlers are not encouraged to use ordinary hand cream while on duty but a special hand cream containing a disinfectant may however be used.✓ (Any 7 × 1) (7)
- 8.2
- Hair must be kept clean and free from dandruff.✓
  - Hair must be tied back if hair extends over the collar.✓
  - Wear an appropriate head dress to prevent hair coming into contact with food.✓
  - Hair must be covered by a net or cap.✓
  - Hair should be brushed in the cloakroom only.✓
  - Wash hair regularly - once or twice a week.✓
  - Wash with a suitable/mild shampoo – avoid borax or alkalis.✓
  - Rinse well.✓
  - Hairbrushes and combs must be kept clean and should not be borrowed from someone else.✓
  - Men must be clean-shaven and beards must be trimmed.✓
  - Brush hair with a soft-bristled brush or a wide-toothed comb.✓
  - Brush regularly to allow growth and blood circulation.✓ (Any 10 × 1) (10)
- 8.3
- 8.3.1
- Greasy smears✓
  - Gnawing marks✓
  - Mouse holes✓
  - Feet marks in the dust✓
  - Runner paths✓
  - Droppings✓ (Any 5 × 1) (5)
- 8.3.2
- Traps/Snares✓
  - Fumigation✓
  - Poison✓ (3)

- 8.4
- Incorrect handling of equipment – wrong handling procedures✓
  - Lack of knowledge on how to handle equipment✓
  - Ignorance of safety risks✓
  - Carelessness and recklessness✓
  - Excessive haste✓
  - Distractions – high noise levels✓
  - Poor planning of a food service unit – workplace design✓
  - Type of equipment used and handling procedures✓
  - Poor labelling of pesticides and poisons✓
  - Hazardous tasks being performed in the workplace✓
  - Incorrect installation, use, maintenance, service, repair or alteration of equipment in the workplace✓
  - Exposure to hazardous substances or processes✓
  - Incorrect storage of equipment and chemicals✓
- (Any 5 × 1) (5)
- 8.5
- Never turn on gas and then start looking for a match✓
  - Open windows and shut main supply if gas leaks✓
  - Room containing gas must be well ventilated✓
  - Do not use near flammable objects✓
  - Be careful of drafts which can blow out flame✓
  - Turn off gas and wait before lighting again✓
- (Any 5 × 1) (5)
- 8.6
- 8.6.1 Earth✓
- 8.6.2 Positive (live)✓
- (2 × 1) (2)
- 8.7
- 8.7.1 **Swabbing:**
- A swab (mop/bud) comprises a piece of cotton wool twisted round one end of a small stick – all sterile before use.✓
  - Before sampling, the swab is moistened in a sterile fluid.✓
  - While removing the swab from the sterile tube, excess fluid is removed from the swab by pressing it against the side of the sterile tube, being careful not to contaminate it with anything.✓
  - Sweep the damp swab systematically and firmly across the test area, rotating the swab as this will help to pick up the organisms adhering to it.✓
  - The swab is then placed into a certain/measured amount of sterile fluid, while aggregating it to remove organisms from the swab.✓
  - The sample of the suspending fluid is then inoculated into a melted, cooled nutrient agar medium, incubated and cultured.✓
  - The sample is then solidified.✓
  - The solidified medium is then examined for colonies, which are counted.✓
  - The findings will indicate the presence of organisms.✓
  - If the swab cannot be transferred immediately into the sterile liquid, return it to its sterile holding tube and store in a cool place at 20 °C up to 24 hours.✓

- Label the tube accordingly.✓
  - Colour changes are observed and results are recorded.✓
- (Any 5 × 1) (5)

8.7.2

**Rinsing technique:**

- Surfaces are rinsed with a sterile rinsing solution, specific for the testing of micro-organisms.✓
  - Organisms present on the surfaces are removed as the solution rinses over it.✓
  - This testing may also involve filling objects with the rinsing solution for contained objects e.g. bottles and containers.✓
  - Sterile rinsing solutions may also be ran through a section of pipelines to test for micro-organisms.✓
  - In all the above cases, examples of the rinsing fluid will be collected and analysed for their total viable count of organisms.✓
  - The result will be recorded as a count per object or per area of plant surface.✓
- (Any 5 × 1) (5)

8.7.3

**Contact plates:**

- Raised surfaces of sterile solidified agar contact plates are prepared and then impressed directly onto the test area.✓
  - Organisms adhered to the agar are then cultured and developed into colonies.✓
  - The results are recorded as a count per object.✓
- (3)

**[50]**

**TOTAL SECTION B: 150**  
**GRAND TOTAL: 200**