



higher education & training

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

MARKING GUIDELINE

NATIONAL CERTIFICATE

SANITATION AND SAFETY N4

4 June 2025

This marking guideline consists of 12 pages.

SECTION A

QUESTION 1

- | | |
|------|---|
| 1.1 | D |
| 1.2 | B |
| 1.3 | C |
| 1.4 | A |
| 1.5 | A |
| 1.6 | D |
| 1.7 | C |
| 1.8 | C |
| 1.9 | C |
| 1.10 | C |
| 1.11 | B |
| 1.12 | A |
| 1.13 | A |
| 1.14 | A |
| 1.15 | B |

(15 × 1) [15]

QUESTION 2

- | | |
|------|-------|
| 2.1 | False |
| 2.2 | False |
| 2.3 | True |
| 2.4 | True |
| 2.5 | True |
| 2.6 | True |
| 2.7 | False |
| 2.8 | True |
| 2.9 | True |
| 2.10 | False |
| 2.11 | True |
| 2.12 | True |
| 2.13 | False |
| 2.14 | True |
| 2.15 | True |

(15 × 1) [15]

QUESTION 3

- 3.1 Chemical✓ used to kill most of the bacteria✓ but does not destroy the spores
- 3.2 Any unplanned and uncontrolled situation✓ where the action or reaction of a person✓ can lead to the injury of personnel or other persons involved
- 3.3 Chemical agent✓ used to remove grease and dirt✓
- 3.4 Deposition✓ of mineral salts from hard water✓
- 3.5 State of chronic or periodic poisoning,✓ which is harmful to the individual and the community in which he/she lives;✓ withdrawal symptoms appear because the individual develops tolerance to the drug
- 3.6 How you take care of your body;✓ involves good physical appearance✓ and practicing of personal habits
- 3.7 Fungi✓ that live on living plants and or animals causing diseases✓ and can cause death of the host
- 3.8 A substance that has adverse effect✓ on microorganisms preventing cell growth or in some way leading to cell death✓
- 3.9 A substance or metabolic product✓ produced in the normal growth of one microorganism✓ that suppresses/inhibits the growth of other microorganisms or even kill other microorganisms
- 3.10 Any process✓ that destroys/kills✓ or eliminates/removes transmissible agents/ infectious organisms/microlife (fungi, bacteria, endospores, viruses) from a surface, equipment and food; achieved by exposure of the object to be sterilised to a chemical or a physical agent for a specific time

(10 × 2)

[20]

TOTAL SECTION A:

50

SECTION B

QUESTION 4

- 4.1 4.1.1
 - Take a warm bath/shower/wash at least once a day.
 - Use a mild soap to do the job adequately.
 - Use a bath sponge or face cloth to wash/scrub the body/skin.
 - Rinse thoroughly after washing to prevent soap residue.
 - Dry yourself with a clean towel.
 - Avoid sharing soaps, sponges and towels.
 - Take a cold shower/rinse to stimulate blood circulation.
 - Change underwear/overalls/clothing regularly. (Any 5 × 1) (5)
- 4.1.2
 - Wash feet every day.
 - Be sure to dry feet thoroughly, especially between the toes.
 - Only wear socks made of cotton.
 - Change socks daily or even often if they get moist or damp.
 - Keep shoes clean.
 - Powder your feet before wearing socks.
 - If possible, do not wear the same pair of socks every day.
 - Go barefoot when at home.
 - Try to wear sandals and avoid tight shoes in warm weather.
 - If possible, use an antifungal powder in tight shoes.
 - Scrub your feet with a sponge, pumice stone or foot scrubber that is not made of very abrasive material.
 - Keep toenails clipped.
 - Choose comfortable shoes when considering footwear.
 - Wear low or flat-heeled shoes or boots.
 - Socks must fit your feet size – not too small or too big.
 - If symptoms of athlete's feet occur, use an antifungal cream to treat the problem. (Any 8 × 1) (8)
- 4.2
 - Wash your hands for at least 30 to 40 seconds.
 - Use an antibacterial liquid soap that is kept in a clean soap dispenser.
 - Wet hands and forearms with water as hot as the skin can bear.
 - Apply soap to the palm of the hand and rub over the hand, wrist and forearms as well as between the fingers.
 - Rinse hands and forearms thoroughly with hot running water.
 - Dry 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 are not clean, use a nailbrush 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.
- Use a special hand cream containing a disinfectant when on duty.

(Any 8 × 1)

(8)

4.3

4.3.1

- Surrounding area must be clean and free from contamination.
- There should be cement around the building that can be properly swept and cleaned.
- Soil or sand will cause problems when it rains.
- Regularly clean and disinfect the area where refuse is stored. Trees and plants outside the building – roots may cause structural damage to the building – entrance for pests.
- Have adequate lighting outside to prevent accidents.
- Practise general maintenance to keep up the standard of hygiene.
- Upgrade old buildings.
- Provide adequate space for activities to be conducted on food premises and for fixtures.
- Premises should be appropriate for the activity.
- Have adequate lighting inside the building for staff to clean properly, work effectively and prevent injury – fit enough energy-saving fluorescent lights.
- Permit the food premises to be effectively cleaned and if necessary, sanitised.
- Do not permit entry of pests.
- Do not permit harbourage for pests.

(Any 6 × 1)

(6)

4.3.2

- Enough water must be available.
- Water must be uncoloured, clear and free from taint and any suspended matter.
- Warm and cold water must be supplied.
- Cold, fresh, pure water enters a building via a series of pipes.
- The water must be filtered and sterilised.
- There must be a stop lock for turning off the main water supply in case of emergency.
- Pipes must be well insulated or boxed to prevent food pests from entering the premises – it must be also be regularly inspected for damage.
- Piping and equipment must be installed away from walls to prevent easy breeding places for insects.

(8)

- 4.4
- Waste must not build up in food areas – remove from the food preparation area frequently.
 - Wet refuse can be disposed of in a waste disposable unit that shreds the waste and flushes it into the drainage system.
 - If no mechanical waste disposal exists, durable plastic bags can be used.
 - When full, the bags must be sealed and removed to the outside bin. At the end of the day, the bin must be removed to prevent pests from coming in.
 - The outside refuse area should be a specially designed area and easily reachable from the kitchen.
 - It should have a concrete surrounding wall and a concrete floor, as well as a water-supply point so that it can be hosed down regularly to keep it clean.
 - Waste bags brought to this area from the kitchen should be stored in plastic or steel bins or large wheeled containers until they are collected.
 - It should not be stored too close to the door or window as refuse tends to attract flies and wasps in the summer.
 - All bins must have tight-fitted lids that will not be blown off by wind or knocked off by animals.
 - The bins must never be allowed to overflow. Arrangements must be made with a contract agency for frequent collection of refuse so that it does not accumulate and cause a health hazard.
 - The bins should be cleaned and disinfected regularly after emptying.
 - Wet refuse should be wrapped in brown paper before placing in the bin.
 - Store waste in a clean area.
 - Waste should not cause tripping or slipping hazards.
 - Use a foot bin to prevent the spreading of bacteria.
 - Use different bins for glass, paper and plastic waste. (Any 8 × 1) (8)
- 4.5
- Identify what needs to be cleaned.
 - Identify how often it needs to be cleaned.
 - Identify who must be doing the cleaning.
 - Identify what chemicals or cleaning agents will be used to complete the task effectively.
 - Identify the precautions needed to protect the person carrying out the task.
 - Monitor the schedule.
 - Revise the adequacy of the cleaning schedule. (7)

[50]

QUESTION 5

- 5.1
- Keep insecticides and poison away from children.
 - Do not breathe in the fumes given off by insecticides
 - Wash your hands/skin after using insecticides.
 - If using a spray insecticide, be careful not to spray it on food or dishes, or onto anything that touches your mouth or eyes.
 - Do not spray near an open fire.
- (Any relevant 2 × 1) (2)

- 5.2 5.2.1 TB stands for tuberculosis.✓ It is a chronic infectious disease✓ caused by germs called tubercle bacilli, which can be passed/spread from one person to another. (2)

- 5.2.2
- Persistent cough that lasts longer than a month
 - Cough that starts out dry but later produces sputum or blood
 - Tiredness/Fatigue
 - Weakness of the body
 - Weight loss
 - Loss of appetite
 - Night sweats/Excessive sweating
 - Chest pain
 - Blood-stained sputum
 - Breathing difficulty – breathlessness/shortness of breath
 - Chills
 - Fever
 - Joint pain
 - Wheezing
 - Rales (additional sound made to those of normal breathing)
 - Diarrhoea
- (Any 7 × 1) (7)

5.2.3 Latent TB

Most healthy people tend to develop latent TB because their immune system is strong enough to defend against the formation of a full-blown active infection.✓ These people have no symptoms and are not infectious.✓ The immune system controls the infection by forming walls around the bacteria, which inactivates the bacteria, but does not kill it. Therefore, the TB bacteria are inactive/dormant, but once the immune system weakens, the TB can be activated changing into active TB. (Any TWO)

Active TB

TB bacteria become active if the immune system cannot stop it from growing.✓ The active bacteria begin to multiply in the body and cause active tuberculosis.✓ The bacteria attack the body and destroy tissue. If this occurs in the lungs, the bacteria can create a hole or lesion in the lung. (Any TWO)
(2 + 2)

- 5.2.4
- People with HIV infection (weak immune system)
 - Patients receiving certain medical treatment, e.g. chemotherapy or transplant antirejection medication
 - People who have been in close contact with someone who has infectious TB
 - People who became infected with TB in the last two years
 - Babies
 - Young children
 - Elderly people
 - People born where TB is common, e.g. Africa, Asia or Latin America
 - Low-income groups with poor healthcare access
 - People in residential facilities such as nursing homes and prisons
 - People exposed to TB through their work
 - People with other conditions that weaken the immune system, especially:
 - Diabetes mellitus sufferers
 - Cancer patients
 - Severe kidney disease sufferers
 - Persons who have a low body mass
 - Persons who are victims of substance abuse
- (Any 6 × 1) (6)

- 5.2.5
- Immediately report any case of active TB to the local or public health department.
 - Contact local health authorities regarding laws and regulations in their area.
 - Allow the person with TB to return to work after a medical clearance letter was received.
 - Have strict confidentiality requirements including keeping medical records separate from other personnel records. Only supervisors and managers may be notified of an individual's TB status.
 - Arrange counselling about the potential risk of TB infection through a trained medical or public health officer.
- (Any relevant 5 × 1) (5)

- 5.3
- Reduced appetite
 - Dilated pupils
 - Talkativeness
 - Agitation
 - Sleep disturbance
 - Anxiety
 - Panic
 - Seizures
 - Headaches
 - Stomach cramps
 - Aggression
 - Paranoia

(Any 6 × 1)

- 5.4
- Mould can be used in the production of antibiotics:✓ Probably the best-known use of mould is in the medical industry, where they help produce antibiotics such as penicillin.✓ Penicillium mould is a blue-green mould that is commonly found on mouldy bread. This mould was the first to be found to contain an antibiotic (penicillin).✓
 - Mould is important in the food industry:✓ Mould can be used in the production of cheese.✓ Penicillium mould is injected into blue cheese, e.g. Roquefort, during its production to give it its unique flavour.✓ It also helps in the making/production of bread, beer and yoghurt.✓
 - Mould helps break down dead material:✓ It improves soil fertility due to decomposition and decaying of organic matter (dead plant and animals),✓ e.g. giving fertile soil.✓ (3 × 2) (6)
- 5.5
- 5.5.1 Organism that needs oxygen to obtain its energy by breaking down certain chemicals
- 5.5.2 Organism that does not need oxygen to release energy
- 5.5.3 Organism that is adaptable and release energy for its own use in either the presence or absence of oxygen (3 × 1) (3)
- 5.6
- Heat resistant: The term usually applies to a culture of cells in which the majority can only be destroyed by wet heat at 100 °C✓ for 10 minutes or by conditions more severe.✓
 - Heat sensitive: A culture of cells in which the majority are destroyed by exposure to wet heat at 63 °C✓ for 30 minutes or by conditions less severe than this.✓ (2 + 2) (4)
- 5.7
- 5.7.1
- Detergents
 - Pesticides
 - Insecticides
 - Sanitisers
- (Any relevant TWO)
- 5.7.2
- Tin
 - Antimony
 - Lead
 - Cadmium
 - Copper
 - Zinc
- (Any relevant TWO)
(2 × 2) (4)
- 5.8 Acidophiles (1)
[50]

QUESTION 6

- 6.1
- Ultraviolet (UV) lamps are used to sterilise workspaces and equipment.
 - UV wavelengths are longer than x-rays.
 - UV wavelengths occur in sunlight that can penetrate the earth's atmosphere.
 - UV lamps are designed to kill microorganisms in air or in liquid.
 - The intracellular RNA and DNA resulting in cell death absorb UV rays – UV light at germicidal wavelengths inhibits DNA replication in organisms.
 - Even though the organism may not be killed outright, it will not be able to reproduce.
 - Because UV rays are not very penetrating, unlike ionising radiation, they are most effectively used either for sterilisation of surfaces or of thin liquid films.
 - Because microorganisms can be shielded from UV light in fissures, cracks and shaded areas UV lamps should only be used as a supplement to other sterilisation techniques. (Any 5 × 1) (5)
- 6.2
- Sight:✓ Under good light, there should be no dirt or wetness.✓
 - Touch:✓ There should be no greasy or rough feeling.✓
 - Smell:✓ There should be no objectionable odour present.✓ (3 × 2) (6)
- 6.3
- Surfaces are rinsed with a sterile rinsing solution, specific for the testing of microorganisms.
 - 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.
 - A sterile rinsing solution may also be run through a section of pipelines to test for microorganisms.
 - In all the above cases samples 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. (6)

- 6.4 6.4.1 Visible contaminators can be removed by mechanical and chemical actions combined.✓ By scraping, scrubbing or washing off soiled debris,✓ the surface will visibly appear clean, and the amount of bacteria present will be reduced. Cleaning agents and detergent can add to the desired outcome. (Any 1 × 2)
- 6.4.2 To remove invisible contaminators, mechanical and chemical actions should also be combined.✓ Mechanical components can include hot water steam machines✓ that spray boiled hot water onto the affected areas. Chemicals must be applied to eliminate all possible contaminants or pathogens. This can be done by sanitising and disinfecting after cleaning. (Any 1 × 2)
(2 × 2) (4)
- 6.5
 - Expensive
 - Can be dangerous
 - Causes damage to rubber seals and hoses
 - Escaping steam can cause a steamy atmosphere (increased humidity), damaging paintwork, electrical fittings, etc. (Any 3 × 1) (3)
- 6.6
 - Good bactericidal activity
 - Low toxicity to humans
 - 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
 - Must not damage equipment treated with it – 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 relevant 4 × 1) (4)
- 6.7
 - Ignorance of safety risks
 - Incorrect handling of equipment
 - Carelessness and recklessness
 - Excessive haste
 - Distractions
 - Poor workplace design
 - Hazardous tasks being performed in the workplace
 - Incorrect installation, use, maintenance, service, repair or alteration of equipment in the workplace
 - People being exposed to hazardous substances or processes
 - Incorrect handling of equipment and machinery
 - Lack of knowledge of how to use certain equipment
 - Incorrect storage of equipment and chemicals
 - Poor labelling of pesticides and poisons
 - Noise levels (Any relevant 4 × 1) (6)

- 6.8
- Use oven mitts to handle hot pots and oven trays (not your apron or tea towel).
 - Turn handles of pots and pans inwards to prevent other staff members from accidentally bumping into them or knocking them off.
 - Lift lids off pans carefully to prevent the steam from burning you.
 - Place a damp tea towel under your chopping board to prevent it from sliding around while chopping.
 - Never walk through the kitchen with a vessel containing hot liquid.
 - Switch off the gas supply immediately after cooking.
 - Be careful when carrying equipment in the kitchen not to knock anything off surfaces or injuring other staff members in the process.
 - Wrap broken glass or china in a few layers of wet newspaper. If this is not done, the sharp edges will pierce through the waste disposal bag and can cut someone's leg.
- (Any relevant 7 × 1) (7)
- 6.9
- Water fire-extinguisher
 - Foam fire-extinguisher
 - Dry-powder fire-extinguisher
 - Specialist fire-extinguisher
 - Carbon-dioxide fire-extinguisher
 - Wet-chemical specialist fire-extinguisher
- (Any 5 × 1) (5)
- 6.10
- A food service facility that uses gas apparatus should always be well ventilated.
 - Be careful of draughts that will blow out the flames and leave the gas leaking into the air.
 - When lighting the pilot, first light the match and then turn on the gas supply.
 - Be careful not to leave items such as oven mitts or tea towels too close to the flames of a gas burner as they might catch alight.
 - Close the main supply of gas when a leak occurs and open all windows and doors to increase ventilation.
 - Turn off the gas and wait a few minutes before relighting again.
 - Switch off gas when not in use.
- (Any 4 × 1) (4)

[50]

TOTAL SECTION B: 150
GRAND TOTAL: 200