



higher education & training

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

MARKING GUIDELINE

NATIONAL CERTIFICATE

SANITATION AND SAFETY N4

27 November 2023

This marking guideline consists of 11 pages.

SECTION A**QUESTION 1**

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

(10 × 2) [20]

QUESTION 2

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

(10 × 2) [20]

QUESTION 3

- 3.1 F
- 3.2 A
- 3.3 B
- 3.4 E
- 3.5 C

(5 × 2) [10]

TOTAL SECTION A: 50

SECTION B**QUESTION 4**

- 4.1 4.1.1
 - Use an antibacterial soap
 - Use a liquid soap
 - Soap must be kept in a clean soap dispenser (3)
- 4.1.2
 - Use water as hot as the skin can bear.
 - Rinse the hands and the forearms with hot running water. (2)
- 4.1.3
 - Palms
 - Wrist
 - Forearms
 - Top of hands
 - Sides of hands
 - Fingers
 - Between fingers
 - Nails (Any 4 × 1) (4)
- 4.1.4
 - Dry the hands with a disposable paper towel or
 - blow dry hands with dryers installed.
 - Dry from the fingertips and
 - finish with the elbows.
 - Prevent chapped and dry skin by drying the hands thoroughly after it has been washed. (Any 4 × 1) (4)
- 4.2
 - Capable of being easily cleaned
 - Smooth
 - Not slippery
 - Even
 - Without cracks or open joints
 - Impervious and waterproof
 - Round angle at the junction where the wall meets the floor
 - Resistant to acids, fat and grease
 - No loose parts to slip over
 - Slope evenly towards gullies or drainage outlets (Any 9 × 1) (9)

- 4.3
- Cigarette ash and butts may contaminate food.
 - It is against the law.
 - Cigarette butts, which are contaminated with saliva, come into contact with food handlers' hands and this can result in cross-contamination.
 - Spit can easily come in contact with the fingers when a cigarette is handled, which increases the likelihood of transferring bacteria to food.
 - People touch their lips while smoking, which also transfers bacteria to food.
 - Smoking promotes coughing. While coughing, small droplets of saliva will spray across the kitchen, causing food contamination.
 - An unpleasant environment is created for non-smokers.
 - The unpleasant smell may spread to the food.
 - Smoke breaks are required, causing a decrease in productivity.
 - Harmful bacteria, such as staphylococci, can get passed onto the food.
- (Any 6 × 1) (6)
- 4.4
- 4.4.1
- Milk must be kept in the containers in which it is delivered.
 - It must be stored in a refrigerator.
 - Containers must be covered with a lid, because milk absorbs strong flavours.
 - Fresh milk and cream should be purchased daily.
 - Tinned milk can be stored in a dry, cool, well-ventilated room.
 - Milk powder can be stored in an airtight container, in the dry store.
 - Imitation cream should be kept in the refrigerator.
 - Pasteurised milk will keep for up to 5 days under refrigeration.
 - Sterilised milk should keep for a minimum of seven days, if unopened.
 - Ultra-heated milk will keep, unopened, for several months.
 - Fresh milk may be frozen.
- (Any 5 × 1) (5)
- 4.4.2
- Store poultry in the coldest part of the refrigerator (bottom shelves).
 - Chilled (refrigerated) poultry should be used within two days.
 - Remove giblets and innards (guts) from the bird before freezing.
 - Place in well-sealed containers.
 - Raw poultry should be kept away from cooked food, as bacteria could be transferred.
 - Frozen poultry should be tightly wrapped, well-labelled and dated.
 - The shelf life of poultry, kept below 18 °C, is 4–6 months.
 - Make sure the bird is properly thawed before it is cooked.
 - Poultry, which is drawn/slaughtered in the kitchen, should be cleaned carefully - boards, tables and knives must be thoroughly cleaned afterwards.
 - Fresh poultry must be hung by its legs in a well-ventilated room for ± 24 hour.

- Frozen poultry should be kept in a deep freezer until required. Thaw completely before cooking.
- Poultry must never be re-frozen, unless it has been cooked thoroughly after thawing.
- Take out of freezer the day before it is required and thaw in sealed containers in a fridge or cold room on the lowest shelf.

(Any 5 × 1)

(5)

4.4.3

- Keep eggs refrigerated in the packing trays.
- Eggs should be stored at a temperature between 0–5 °C.
- Store eggs with the 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 the egg white and yolk can be frozen separately.

(Any 5 × 1)

(5)

4.5

- 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, then durable plastic bags can be used.
- When full, they must be sealed and removed to the outside bin. At the end of the day, the bin must be removed to prevent pests coming in.
- The outside refuse area should be a specially designed area and easily reached 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.
- Bins should not be too near to the door or window, since 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 it in the bin.
- Store waste in a clean area.
- Waste should not cause tripping or slipping hazards.
- Use a foot bin to prevent the spread of bacteria.
- Use different bins for glass, paper and plastic waste.

(Any 7 × 1)

(7)

[50]

QUESTION 5

- 5.1
- Place the refrigerator in a well-ventilated area, away from cooking appliances and out of direct sunlight.
 - Keep the door shut whenever possible. On a warm day, the temperature of a refrigerator can rise from 3 °C to 10 °C if the door is left open for 20 seconds.
 - Cool hot foods to a temperature of 15 °C or below, before placing them in the refrigerator.
 - Do not pack food, too tightly into the refrigerator. There must be enough space around the food for the cold air to circulate.
 - Defrost the refrigerator regularly to prevent the build-up of ice around the refrigerator coils, as this reduces their efficiency.
 - Do not allow the temperature of the refrigerator to drop below 1 °C, because ice crystals will form in the food, causing loss of texture and quality.
- (6)
- 5.2
- 5.2.1
- 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 health-care access
 - People in residential facilities such as nursing homes and correctional facilities
 - 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 10 × 1) (10)
- 5.2.2
- Take tablets and do not miss a single treatment.
 - Go back to the clinic on the dates you are told, to get fresh medical supplies and for check-ups on your progress to recovery.
 - Report to your clinic if you react badly to treatment.
 - Do not stop treatment, unless the clinic says so.
 - Keep your body healthy and eat body-building foods.
 - Remember that success of treatment depends on the patient.
- (7)

- Take medication under supervision.

- 5.3
- Age
 - Body size and weight
 - State of mind or mood
 - How much is drunk
 - How quickly the alcohol is consumed
 - Physical make-up
 - Personality
 - Previous experience of alcohol
 - State of tiredness or fatigue
 - Presence of any medicines
 - When last food was eaten
- (Any 5 × 1) (5)
- 5.4
- Sensitivity of the cells✓ – Most sensitive = easily destructible✓
 - Dosage of irradiation absorbed✓ – The longer/stronger the irradiation, the more destructive.✓
 - Oxygen✓ – Oxygen enhances the lethal effect.✓
 - Temperature✓ – High temperatures is favourable for the destruction of micro-organisms.✓
- (4 × 2) (8)
- 5.5
- Time
 - Availability of food
 - Moisture
 - Temperature
 - Availability of oxygen
 - pH-surroundings
 - Competition
 - Darkness
- (Any 6 × 1) (6)
- 5.6
- Sight✓
Under good light, there should be no sign of soil on a wet or dry surface and, on a smooth surface, draining water should not 'break' excessively.✓
 - Touch✓
There should be no greasy or rough feeling to clean fingers rubbed over the surface. A clean white tissue, wiped several times over the surface, should show no discoloration.✓
 - Smell✓
There should be no objectionable odour present.✓
- (3 × 2) (6)
- 5.7
- To promote health and safety – preventing cross-contamination
 - To prolong the life of fixtures, fittings and surfaces, by maintaining it
 - To improve the appearance of the establishment
 - To prevent micro-organisms
- (Any 2 × 1) (2)

[50]

QUESTION 6

- 6.1 6.1.1
 - Boiling water will destroy all vegetative cells and some of the spores present, therefore leaving items sanitised.
 - Expose small items, such as piping bags, nozzles and cloths, to boiling water for at least 10 minutes.
 - Immersing items in boiling water is not a reliable method of sanitisation, because of the difficulty of ensuring that the items have been adequately heated.
 - Boiling water reaches a temperature of 100°.
- 6.1.2
 - Water of 60 °C to 65 °C is used for general cleaning of most areas in the food service unit.
 - Hot/warm water, containing chemicals, that is applied with high pressure jets, is sometimes used to clean non-absorbent, uncomplicated surfaces such as tiles, floors, walls, plates, etc., removing organic soil and therefore reducing the amount of bacteria present.
 - Detergent reacts well with water at this temperature, making it an effective way to clean variety of soiled areas.
 - Pumping hot/warm water through some processing equipment will have the same cleaning effect, because the heat of the water may also destroy organisms.
 - The most common time/temperature in cleaning plant is 85 °C for 10 minutes.
 - The higher the temperature, the shorter the time of exposure.
 - Hot water only destroys the most sensitive bacterial spores.
 - Water, at a temperature of at least 77 °C, is used because it evaporates faster, leaving items dry – the use of a tea towel or dish cloth is eliminated, reducing the probability of bacteria spreading from one item to the next.
- 6.1.3
 - Steam cleaners use vapour steam to clean, sanitise/disinfect, and remove most stains and built-up dirt/germs.
 - Water in a steam cleaner is heated in a boiler, which converts the liquid to vapour that exits the machine via a nozzle.
 - Steam loosens dirt on hard surfaces and soft fibres, because of its good penetration power – reaching difficult to access areas.
 - The vapour in a steam cleaner contains about 5% water, which is drier than the air we breathe.
 - The machine generates temperatures of up to 180 °C, therefore killing fungi, mould, bacteria and other allergens.
 - Steamers, generally, use low pressure levels and can be used on many different types of surfaces, such as floors, carpets, upholstery, etc.
 - Never steam surfaces made of pressed paper, cardboard or surfaces painted with non-enamel paint.

- Use low pressure when steaming waxed floors.
- On unwaxed vinyl floors, work quickly and do not allow heat to build-up, as it can soften the vinyl and affect the texture.
- The recommended time of application depends on the method used.
- Steam cleaning could be expensive, because it requires special steam generating plant.
- It can be dangerous to personnel.
- It can cause damage to rubber seals and hoses.
- Escaping steam can cause a steamy atmosphere, which can damage paint work, electrical fittings, etc.

6.1.4 Autoclaving:

- An autoclave is an apparatus which is used to sterilise objects by means of high-pressure steam.
- Steam, generated under pressure, which is greater than atmospheric pressure at sea level, has a temperature higher than 100 °C.
- Surfaces and equipment are seen as highly sterilised if exposed to steam at elevated temperatures (121 °C) for 15 minutes.
- Very few types of heat resistant micro-organisms can survive at a temperature this high.
- Frequently, times of much less than 15 minutes will adequately destroy the contained micro-flora.

6.1.5 Cold water flush/rinse:

- After cleaning operations, detergents and sanitisers must be flushed/rinsed away using, clean, cold and potable water.
- This eliminates all traces of detergents or sanitisers used during the cleaning process.
- A cold water flush/rinse is the last step in cleaning.
- Good microbial quality water is essential, otherwise the cleaned areas will only be re-contaminated/re-infected.

(Any 5 × 3) (15)

- 6.2
- It must have a good bacterial activity, be active against a wide variety of organisms (microbiological sterilisation) and suit the product and the process for which the equipment is used.
 - It must have a low toxicity for human beings.
 - It should not affect the colour, odour or flavour of food that is processed in the sanitised equipment.
 - It must be cheap (cost effective), effective and convenient.
 - It must be easy to dispense of and to wash away. Also, it must be suitable for the method of application (manual, spray or cleaning in place).
 - It must not adversely affect the operators who handle it.
 - 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.
 - The method of application should be user-friendly and require little skill.
- (Any 5 × 1) (5)
- 6.3
- 6.3.1 The absence✓ of danger.✓ (2)
- 6.3.2 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)
- 6.4
- Always remain calm.
 - Act only after deciding exactly what to do.
 - Always remember that first aid is only temporary.
 - Remove other possible hazards.
 - Ensure that the patient is comfortable and give all possible assistance until the doctor or ambulance arrives.
 - If possible, try to assess the nature of the injury.
 - Always keep an air passage of the patient open.
 - Acute bleeding from a cut or torn artery, a vein or wound must be stopped.
 - Treat the patient for shock.
 - Avoid complications – never try to reset a bone fracture.
 - The most important rule is to summon a doctor immediately, if the seriousness of the injuries warrants it.
 - If possible, do not attempted to move the patient.
 - Once the patient is treated, record the incident in the accident book.
- (Any 9 × 1) (9)
- 6.5
- 6.5.1
- Buildings must be clean and in good repair – hot and cold water must be available.
 - Toilets must be clean, with adequate hand-washing facilities.
 - First aid and clothing lockers must be available.
 - Equipment and storage areas should be in good condition.
- (4)

- 6.5.2
- Cover cuts with waterproof dressing.
 - Wear clean overalls.
 - Food handlers must be clean, have clean habits and be in good health.
 - Notify employers when suffering from diarrhoea or vomiting. (4)

- 6.5.3
- Food must be stored adequately and suitably packed.
 - No living animals are permitted in food areas.
 - The Environmental Health Officer is responsible for investigating outbreaks of food poisoning. (3)

- 6.6
- Gas is flammable and poisonous.
 - Never turn on gas and then start looking for a match.
 - Open windows and shut main supply if there is a gas leak.
 - Rooms containing gas should be well-ventilated.
 - Do not use near flammable objects.
 - Be careful of drafts, which can blow out the flame.
 - Turn off gas - wait before lighting again. (Any 5 × 1) (5)
- [50]**

TOTAL SECTION B: 150
GRAND TOTAL: 200