higher education & training

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

MARKING GUIDELINE

NATIONAL CERTIFICATE

JUNE EXAMINATION

SANITATION AND SAFETY N4

3 JUNE 2014

This marking guideline consists of 9 pages.

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SECTION A

QUESTION 1

1.1	1.1.1	C
	1.1.2	C
	1.1.3	A
	1.1.4	C
	1.1.5	B
	1.1.6	A
	1.1.7	B
	1.1.8	C
	1.1.9	B
	1.1.10	C

(10 x 2) (20)

1.2	1.2.1	True
	1.2.2	False
	1.2.3	True
	1.2.4	False
	1.2.5	True
	1.2.6	False
	1.2.7	False
	1.2.8	True
	1.2.9	False
	1.2.10	False

(10 x 1) (10)

1.3	1.3.1	C
	1.3.2	D
	1.3.3	A
	1.3.4	B
	1.3.5	E

(5 x 1) (5)

1.4	1.4.1	B
	1.4.2	A
	1.4.3	E
	1.4.4	D
	1.4.5	C

(5 x 1) (5)

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1.5
1.5.1 fungus
1.5.2 80
1.5.3 AZT/ZDV
1.5.4 immune
1.5.5 mycotoxin
1.5.6 spoilage
1.5.7 60-65 °C
1.5.8 higher
1.5.9 F
1.5.10 ignite

(10 x 1) (10)
[50]

TOTAL SECTION A: 50

SECTION B

QUESTION 2

2.1 A science of the establishment and maintenance of health through conditions or practices (as of cleanliness) conducive to health. (1)

2.2
- A place for microbes to accumulate
- Skin disease such as eczema
- Blocked pores and therefore the body is unable to secrete waste products, causing kidneys to overwork
- A person with a dirty body and unpleasant smell, causing an unpleasant working environment

(Any 3 x 1) (3)

2.3
- Wash feet every day.
- Be sure to dry feet thoroughly, especially between the toes.
- Wear cotton socks and change them daily, or more often if they get moist or damp.
- Powder feet before wearing socks to avoid sweaty and smelly feet.
- Do not wear the same pair of shoes every day. Alternate shoes.
- Go barefoot when at home.
- Avoid tight shoes in warm weather.
- Use antifungal powder in tight shoes.
- Give feet a good scrub when in bath or shower.
- Dry properly between toes.
- Keep toenails clipped.
- Footwear must be comfortable.

(Any 6 x 1) (6)

2.4
- Dish a spoonful of the dish onto a plate.
- Taste food with a clean spoon.
- Food may not be touched with fingers.
- Do not stir food with the same spoon for tasting.
- Wash/sterilise all utensils after tasting to avoid contamination. (5)

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2.5 Any permanent or semi-permanent facility that stores, prepares or handles food (2)

2.6
- Food preparation, handling and storage areas are kept clean and food handlers maintain good standards of personal hygiene at all times.
- Food should be handled so as to prevent contamination.
- Food handlers should observe good personal hygiene.
- Use different chopping boards/work surfaces, equipment and utensils for raw and cooked food.
- Equipment and surfaces are cleaned thoroughly before and after use.
- Unnecessary handling of food is avoided. (Any 5 x 1) (5)

2.7
- Easily cleaned
- Good quality
- Effective for purpose which it is used for
- Rust resistant
- Chip resistant
- Have adequate safeguards to prevent injury (Any 5 x 1) (5)

2.8 First-In-First-Out. (1)

2.9
- The quality suffers each time frozen meat is defrosted and refrozen.
- Freezing created ice crystals within the structure of the meat.
- These ice crystals rupture the fibres which causes the meat to bleed when defrosted.
- If repeated, the texture of the meat will be very dry.
- Never refreeze meat which has been thawed and held at room temperature. (Any 3 x 1) (3)

2.10
- A persistent cough lasting for more than a month
- A cough starting out dry but later produces sputum or blood
- Chest pain
- Breathing difficulty
- Feeling weak
- Fatigue
- Loss of weight and appetite
- Chills and fever
- Joint pain
- Wheezing
- Rale (additional sounds made to those of normal breathing)
- Excessive sweating, including night sweats
- Diarrhoea (Any 10 x 1) (10)

2.11
- Sexual transmission
- Transmission through blood
- Transmission through pregnancy (3)

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2.12 Drug addiction: the user has no control and uses the drug regardless of its negative side effects
Drug dependence: being physically dependant, craving for and constantly wanting to increase the dose of a specific drug (2 x 2) (4)

2.13
- Produces increased wakefulness
- Faster and clearer flow of thought
- Increased focus
- Better general body coordination
- In sport it can improve sprint, endurance and team sports performance (2)
- **[50]**

QUESTION 3

3.1
- Ferment useful chemicals
- Produces certain food stuffs such as wine, cheese, yogurt, bread
- Destroy wastes
- Cause and prevents disease
- Produce antibiotics (5)

3.2 Lag
During the lag phase, the cells are introduced to the new surroundings and environment and slowly start increasing in size.

Logarithmic phase
The cells have adapted to the medium and multiply at regular intervals until the maximum number that can be supported is reached.

Stationary
Growth rate slows and the production of new cells equals the rate of cell death. This period, known as stationary phase, involves the establishment of equilibrium in population numbers and a slowing down growth of individual cells. The stationary phase reflects a change in growing conditions – i.e. lack of nutrients and/or the accumulation of waste products.

Phase of decline
When the rate of cell death exceeds the number of new cells formed. The cells are not transferred to a new favourable environment and they will gradually decrease in amount, leading to death of the culture. The population may diminish until only a few cells remain, or the population may die out entirely. (4 x 2) (8)

3.3
3.3.1 below 20 °C
3.3.2 between 5 °C and 63 °C
3.3.3 above 45 °C
3.3.4 below 5 °C

(4)

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3.4 Microwaves are high frequency radiation waves. They are absorbed by certain solids and liquids and not by the organic material present. Liquids absorb microwaves by the heat which is generated. The heat cooks the organic material and destroys the microorganisms present. (3)

3.5
- The initial temperature of food. The lower the initial temperature, the longer it will take to heat up.
- The consistency of the food. Solid food will take longer. The greatest penetration of microwaves occurs on the outside areas. Smaller portions will heat up quicker.
- Distribution of moisture. Moist areas will heat up faster causing difference in temperature.
- Food density. Very dense food will require more moisture. Foods with varying density will experience uneven heat distribution. (4)

3.6
- Wash hands and clean any dishes or utensils when you are making or serving food.
- Keep juices from meat, poultry and seafood away from ready-to-eat foods.
- Cook foods to proper temperatures.
- Promptly refrigerate any food you will not be eating right away.
- Boil water before drinking.
- Always refrigerate fish.
- Don't eat tropical fish caught during blooms of poisonous plankton.
- Don't eat shellfish exposed to red tides. (Any 6 x 1) (6)

3.7 Powdered or granulated gelatine could contain a small amount of dormant food poisoning bacteria. When used, it should be kept at a temperature above 63 °C to minimise the growth and multiplication. (2)

3.8
- Inspect all food and wash fruit and vegetables with water of drinking quality before preparation.
- Separate raw and high-risk, cooked and ready-to-eat foods at all stages of preparation, storage, display and distribution.
- Do not use the same equipment, utensils and working surfaces to handle and prepare raw and high-risk, cooked and ready-to-eat foods.
- Only handle food when unavoidable.
- Keep food covered as much as possible.
- Prevent insects, animals and birds from entering food service facilities.
- Do not use unsuitable, defective or dirty equipment.
- Use good personal hygiene practices.
- Use correct cleaning procedures, especially the washing and sanitizing of all equipment used to prepare raw food, including benches and chopping boards.
- Promptly remove unfit or waste food and refuse from food area.

(Any 8 x 1) (8)

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3.9 It is commonly found on humans. It causes skin and wound infections but may be carried naturally on the skin of healthy people and is carried in the nose and throat of almost half the population. The pathogen is sometimes found in unpasteurised milk (3)

3.10
3.10.1 D
3.10.2 A
3.10.3 F
3.10.4 C
3.10.5 B
3.10.6 E

(6 x 1) (6)

3.11 An antibiotic is a metabolic product by one microorganism that inhibits or kills other microorganisms. (1)
[50]

QUESTION 4

4.1 4.1.1 Cleaning is the complete removal of food soil using appropriate detergent or suitable chemicals under recommended conditions.

4.1.2 Detergent is a chemical agent or substance used in the food service industry to remove grease, dirt and debris.

4.1.3 A disinfectant is a chemical agent which is used to destroy disease causing bacteria, microorganisms or pathogens excluding spores and some viruses.

(3 x 2) (6)

4.2
- Make sure to use a suitable detergent to prevent any damage to the effected surface.
- Thoroughly dry surfaces after cleaning. Dampness promotes growth of bacteria and makes it ideal for germs to multiply.
- Hygienically clean surfaces immediately after use and throughout service.
- Use separate chopping boards for meat, fish, poultry and vegetables.
- Wash and dry your hands after handling high-risk foods such as raw meat.
- Be aware of all safety hazards, e.g. slipping on wet floors or tripping over extension leads.
- Replace all equipment to original position after cleaning.
- Always follow manufacturer's instructions and carry out the task according to your company's organisational procedure.

(Any 6 x 1) (6)

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4.3 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. (6)

4.4
- A sterile moistened bud is used to swab the affected area.
- Remove the bud from the sterile tube, being careful not to contaminate it with anything.
- Sweep the bud across the test area, rotating the swab as the sample is being taken as this will help to pick up the organisms adhering to it.
- After doing so, the swab is then placed into a certain amount of sterile fluid and then agitated to remove the organisms from the swab.
- Samples of the fluid are inoculated into a melted, cooled nutrient agar medium and cultured.
- The sample is then solidified and examined for colonies which are counted. This will indicate the presence of organisms and be an indication of poor cleaning procedures.
- If the swab cannot be transferred immediately into the sterile liquid, return it to its 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 8 x 1) (8)

4.5
- Must offer microbiological sterilisation without being of harm to the user.
- It should not damage or corrode the area or surface to which it is applied.
- It should be cost effective.
- The method of application should be user friendly and require little skill. (4)

4.6
- Clean spills up as fast as possible. Make use of a wet floor sign while doing so.
- Do not leave boxes, containers or bags on the floor as this may cause someone to trip.
- Repair any damaged electrical cords.
- Don't overload circuits by using multiple plugs or extension cords.
- Do not use electrical appliances near the sink or other water. This could cause electrocution of the person operating the appliance.
- Sufficient lighting in all food service areas will also prevent accidents from happening.
- By wearing protective gear during service, you can prevent chemicals from harming you or steam from burning you.
- Store heavier items on lower shelves. If they were to be on higher shelves, staff members would strain or injure their backs lifting them.
- Use the correct lifting procedure to lift and carry goods. (Any 8 x 1) (8)

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4.7
- Remain calm.
- Inform your supervisors as soon as possible. They will be able to help and get professional assistance.
- Keep the patient calm and comfortable. Remember never to move the patient unless the situation is life threatening.
- Assess the nature of the incident. This will help in deciding how to treat it.
- Keep the air passages of the patient open.
- Stop acute bleeding as soon as possible.
- Treat patient for shock.
- Once the patient has been treated, record in accident book for future reference. (8)

4.8
- Never turn on gas and then start looking for a match.
- Open the windows and shut off main supply if there is a gas leak.
- A room containing gas apparatus must be well ventilated.
- Do not use gas burners next to flammable objects.
- Be careful of drafts which may blow out the flame and leave the gas leaking into the air. (4)
- Turn off the gas and wait a few minutes before relighting again. **[50]**

TOTAL SECTION B: 150
GRAND TOTAL: 200

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