

**091206T4PTT**

**PERIOPERATIVE THEATRE TECHNOLOGY LEVEL 6**

**HE/OS/TT/CR/03/6/A**

**MAINTAIN OPERATION THEATRE INSTRUMENTS AND APPARATUS**

**July/August 2024**



**TVET CURRICULUM DEVELOPMENT, ASSESSMENT AND CERTIFICATION  
COUNCIL (TVET CDACC)**

**WRITTEN ASSESSMENT**

**3 HOURS**

**INSTRUCTIONS TO CANDIDATE**

1. This paper consists of two sections; **A** and **B**
2. Answer **ALL** the question as guided in each section
3. Marks for each question are as indicated in the brackets
4. You are provided with a separate answer booklet to answer the questions
5. Do not write in this question paper

**This paper consists of THREE (3) printed pages.**

**Check the question paper to ascertain that all the pages are printed as  
Indicated and that no questions**

## SECTION A (40 MARKS)

*Answer ALL the questions in this section.*

1. Proper instrument inspection minimizes the risk of infection, ensures the efficiency of surgical procedures, and enhances patient safety. Explain FOUR key features a theatre technologist will consider when inspecting scissors. (4 Marks)
2. Sterilized items are typically assigned a shelf life based on validation studies and regulatory requirements. State FOUR factors that affect shelf life of stored sterile items. (4 Marks)
3. Safe handling of instruments in the theatre is critical to ensure the safety of both patients and healthcare providers. Highlight FIVE effective ways of handling instruments during a surgical procedure. (5 Marks)
4. Adhering to guidelines for handling and maintaining electrical equipment, the surgical teams can enhance patient safety and improve surgical outcomes. State FOUR specialized equipment used in care of patients in surgery. (4 Marks)
5. Microscopic instruments are designed to allow surgeons to perform intricate procedures on very small structures within the body, such as nerves, blood vessels, and tissues. Briefly describe the care of these instruments. (4 Marks)
6. Packaging materials are important in instrument processing. Identify FIVE characteristics of good packaging materials for all methods of sterilization. (5 Marks)
7. Disinfectants are used on inanimate objects to kill microorganisms. Outline FOUR factors that influence their effective. (4 Marks)
8. Safety when handling instruments is key in the Theatre. Identify THREE precautions that reduce occupational and patient risk in equipment sterilization. (3 Marks)
9. The properties of materials used to make operating theatre instruments are crucial for ensuring functionality and safety. Explain FOUR properties of materials used to make operating theatre instruments. (4 Marks)
10. Retractors are essential surgical instruments used in the operating theatre to hold back tissues and organs, providing surgeons with better visibility and access to the surgical area. Outline THREE types of retractors used in theatre. (3 Marks)

**SECTION B (60 MARKS)**

*Answer any **THREE** questions in this section*

11. Instrument sterility is important to renders items safe for contact with non-intact tissue and for exposure to the vascular system without transmitting infection in operating theatre.
- a) Outline the **THREE** available sterilizing agents giving one example each. (6 Marks)
  - b) Describe the policies and procedures that help to maintain sterile instruments and equipment's in operating theatre. (14 Marks)
12. The perioperative theater technologist should know the names of specific instruments to be safe in clinical practice setting.
- a) Using a clear diagram illustrate a Volkmann rake retractor (5 Marks)
  - b) Outline **THREE** aspiration instruments. (3 Marks)
  - c) An anesthesia machine is a device which is used to deliver a precisely known but variable gas mixture including anesthetic and life-sustaining gases to the patient's respiratory system. Describe the components of an Anesthesia machine. (12 Marks)
13. You are performing decontamination of instruments in theatre in preparation for sterilization. During instruments inspection stage you identify several faulty instruments
- a) Outline **FOUR** personal protective equipment used in the procedure. (4 Marks)
  - b) Describe the process of referral of dysfunctional instruments. (8 Marks)
  - c) Describe the waste disposal methods of waste generated during the process of decontamination and sterilization. (8 Marks)
14. Electrical burn through the patient's skin is the greatest hazard of electro surgery.
- a) Differentiate between monopolar and bipolar diathermy (6 Marks)
  - b) Describe precautions that should be taken when using a diathermy machine. (14 marks)

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