

**091906T4HRI**

**HEALTH RECORDS AND INFORMATION TECHNOLOGY LEVEL 6**

**HE/OS/HR/CC/04/6/A**

**Apply Medical Instrumentation**

**Nov /Dec 2024**



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

**WRITTEN ASSESSMENT**

**Time: 3 HOURS**

**INSTRUCTIONS TO CANDIDATE**

1. Marks for each question are indicated in the brackets.
2. The paper consists of **TWO** sections: **A** and **B**.
3. Candidates are provided with a separate answer booklet
4. **DO NOT** write on this question paper.

**This paper consists of FOUR (4) printed pages  
Candidates should check the question paper to ascertain that all pages  
are printed as indicated and that no questions are missing.**

**SECTION A (40 MARKS)**

**Answer ALL the questions in this section.**

1. Medical instrumentation plays a critical role in healthcare settings by aiding healthcare professionals in meeting the objectives of healthcare.
  - a) What do you understand by the term medical instrumentation|? (2 Marks)
  - b) State TWO examples of medical instrumentation that are used in triage (2 Marks)
2. Biomedical instruments are designed to monitor various physiological parameters essential for patient care. State FOUR parameters that can be measured using biomedical instruments (4 Marks)
3. Understanding medical equipment is crucial for healthcare professionals, as it ensures patient care and safety. Outline FOUR objectives of learning medical equipment. (4 Marks)
4. Prolonging the lifespan of medical equipment is essential for cost efficiency and reliability in healthcare settings. State FIVE general ways of increasing lifespan of medical equipment in hospital. (5 Marks)
5. Telemedicine equipment refers to any technology used to provide medical care and services remotely by telecommunication and information technologies. State FOUR examples of telemedicine equipment. (4 Marks)
6. The medical laboratory technologist establish diagnosis through examining specimen. List THREE examples of sample specimens extractable from humans for testing. (3 Marks)
7. Medical instruments give results after investigation of sample specimen. Outline FOUR clinical results likely to be given by medical instrument to determine diagnosis (4 Marks)
8. Proper maintenance of a blood glucometer after use ensures accuracy in future readings and prolongs the device's lifespan, making it reliable for ongoing patient care. State FOUR maintenance procedures needed for blood glucometer after use by medical profession (4 Marks)
9. Health records officers may encounter several challenges when using medical instruments, impacting their ability to accurately manage patient information and data. Identify FOUR

barriers that medical records officer can face when using the medical instruments.

(4 Marks)

10. You have two medical instruments labelled intended use, and indication for use respectively.

Distinguish between intended use, and indication for use.

(4 Marks)

**SECTION B (60 MARKS)**

**Answer THREE questions from this section**

11. Medical devices are classified based on different criteria and class is one of them.
- a) Describe THREE categorizations of medical equipment based on classes (6 Marks)
  - b) Describe any SEVEN general ways of improving the longevity of medical equipment (14 Marks)
12. A newly established level 5 hospital, intends to purchase medical equipment to be used in different departments
- a) Explain FIVE ways in which the facility will categorize the equipment (10 Marks)
  - b) Explain FIVE factors to consider when procuring medical equipment (10 Marks)
13. Radiology department is one of the crucial departments in a hospital that helps in diagnosis diseases/ disorders.
- a) Explain FOUR medical equipment used in radiology department. (8 Marks)
  - b) Outline SIX indications of an X-ray machine (12 Marks)
14. A county government to upgrade a level three health facility to level four in order to offer more services that are missing at level three. In order to conduct tests, the county acquire various laboratory equipment.
- a) Explain FIVE the county will acquire for his laboratory. (10 Marks)
  - b) Explain one use for each of the FIVE equipment listed in 14 (a) above. (10 Marks)

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