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**091905T4HRI**

## **HEALTH RECORDS AND INFORMATION TECHNOLOGY LEVEL 5**

**HE/OS/HR/CC/05/5**

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**Apply Medical Instrumentation**

Date: 20.11.2025 02:30 PM

**November /December 2025**

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

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### **WRITTEN ASSESSMENT**

**TIME: 3 HOURS**

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### **INSTRUCTIONS TO CANDIDATE**

1. This paper consists of **TWO** sections: **A** and **B**.

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2. Attempt **ALL** questions in section A.

3. Attempt question **ELEVEN (11)** and any other **TWO (2)** questions in section B.

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4. Marks for each question are indicated in the brackets.

5. Candidates are provided with a separate answer booklet.

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6. Do not write on the question paper.

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**This paper consists of THREE (3) 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)**

*Attempt ALL the questions in this section.*

1. Differentiate between accuracy and sensitivity as parameters used in assessing medical equipment. (4 Marks)
2. During orientation, a biomedical trainee is tasked to give examples of Class I medical devices according to FDA classification. List FOUR class I medical devices. (4 Marks)
3. A nurse in a critical care unit is tasked to monitor a patient's oxygen levels and heart activity. List FOUR monitoring and diagnostic instruments suitable for this case. (4 Marks)
4. During a minor surgical procedure, a trainee doctor requests you to provide surgical instruments. Mention FOUR surgical instruments. (4 Marks)
5. In a dialysis unit, patients require therapeutic support. Identify FOUR therapeutic instruments commonly used in hospitals. (4 Marks)
6. A health regulatory official is classifying a new medical device. Name FOUR differences in device classification. (4 Marks)
7. A laboratory technologist is tasked to select equipment for blood and urine analysis. State FOUR examples of medical laboratory equipment. (4 Marks)
8. Most hospitals end up purchasing new equipment due to regular damages experienced. Give FOUR general ways of increasing lifespan of medical equipment in hospital. (4 Marks)
9. A hospital is training biomedical staff on maintenance strategies. State FOUR devices that require preventive maintenance after every 6 months. (4 Marks)
10. List FOUR equipment that can be used by patients that are unable to walk on their own. (4 Marks)

**SECTION B: (60 MARKS)**

***Attempt question ELEVEN (11) and any other TWO (2) questions in this section***

11. A newly established county hospital wants to purchase diagnostic imaging machines.

- a) Describe FIVE types of diagnostic medical imaging machines. (10 Marks)
- b) Explain FIVE factors to consider when selecting medical imaging equipment. (10 Marks)

12. Mr P is working as a biomedical engineer in a hospital setting where new interns need orientation on medical devices.

- a) Explain FIVE functions of medical laboratory equipment. (10 Marks)
- b) Describe FIVE instrument cleaning tips. (10 Marks)

13. As part of a quality assurance committee, you are required to develop a hospital-wide QA program for medical devices.

- a) Outline FIVE importance of quality assurance (QA) in medical instrumentation. (10 Marks)
- b) Explain FIVE steps of quality improvement in medical instrumentation. (10 Marks)

14. Medical Equipment are necessary for day-to-day activities in different health care facilities and medical training centers.

- a) Describe FIVE objectives of medical Equipment. (10 Marks)
- b) Explain FIVE stakeholders of medical equipment. (10 Marks)