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HEALTH RECORDS AND INFORMATION TECHNOLOGY LEVEL 6

HE/OS/HR/CC/01/6/A

Apply Medical instrumentation

March/April 2025



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

WRITTEN ASSESSMENT

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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. Answer **ALL** the questions in section **A**, question **11** and **any other TWO** Questions in **Section B**
4. Candidates are provided with a separate answer booklet
5. **DO NOT** write on this question paper.

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)*Answer ALL Questions from this section*

1. List TWO inpatient equipment (2 Marks)
2. Hospital management plays crucial role in maintenance of hospital equipment. State any FIVE of those roles (5 Marks)
3. User trainers are responsible for training the equipment users and also carry out support supervision in their areas of operation. List FOUR user trainers of hospital equipment (5 Marks)
4. In any healthcare facility, ensuring that medical instruments remain in optimal working condition is vital for providing safe and effective care. List FIVE medical instruments which are internally-managed for preventive, maintenance and repairs done every 12 months (5 Marks)
5. Name TWO types of boilers that are utilized in hospital facilities for high level of disinfection of instrument (2 Marks)
6. Oxygen cylinder set are used for storing pressurized oxygen to be used by patients who are in need of it. Outline FOUR preparation of oxygen cylinder (4 Marks)
7. State reasons why X-RAY machines are no longer in use (4 Marks)
8. Ethical considerations help healthcare professionals make decisions that honor patients' rights and delivering the highest standard of care when using medical instruments. State FIVE ethical considerations in the use of medical instrumentation in patient care. (5 Marks)
9. In the field of healthcare, medical instruments play a significant role in diagnosing diseases and providing accurate assessments of a patient's condition. Name any TWO medical instruments to be used in the diagnosis of each of the following;
 - a) Heart diseases (2 Marks)
 - b) Cancer (2 Marks)
10. Proper calibration and maintenance of medical instruments are essential for ensuring accurate, reliable, and consistent measurements, which directly impact patient care. Highlight FOUR significance of ensuring proper calibration and maintenance of medical Instruments (4 Marks)

SECTION B: (60 MARKS)

Answer Question 11 and any other TWO Questions in this section

11. Mr. X and Mr. Z are considering a partnership to establish a new hospital that will offer a comprehensive range of healthcare services to the community. As part of their initial planning, they aim to invest in medical equipment that will be essential for providing high-quality care to patients. Choosing the right medical instruments is a critical first step in setting up the hospital, as these tools will directly impact the accuracy of diagnoses, the effectiveness of treatments, and the overall success of their healthcare facility.
- a) State FOUR types of quality control that may be useful in ensuring availability of quality medical devices. (8 Marks)
 - b) Discuss SIX factors to consider before they purchase any equipment. (12 Marks)
12. Medical instruments need to give accurate and consistent data. In order to ensure that data is accurate and consistent regular checks must be made.
- a) Discuss FIVE ways of ensuring medical equipment are in good performance (10 Marks)
 - b) Explain FIVE equipment used in hospital in various department (10 Marks)
13. In a field where precision, reliability, and safety are paramount, the quality of medical devices directly impacts patient outcomes and operational efficiency. Quality Assurance processes involve rigorous testing, inspection, and documentation
- a) Explain FOUR primary types of quality assurance approaches each with distinct objectives and methodologies (8 Marks)
 - b) Discuss FIVE economic benefits of Quality Assurance in medical instrumentation (12 Marks)
14. There are a number of risks for medical device users. When buying the device, the users need to have risk management knowledge.
- a) Giving an example in each case, describe FIVE reasons why risk management is important as far as medical devices is concerned. (10mks)
 - b) Describe FIVE safety measures involved in the use of medical instrumentation (10 Marks)