

061006T4ICT

ICT TECHNICIAN LEVEL 6

IT/OS/ICT/CR/6/6

PERFORM COMPUTER REPAIR AND MAINTENANCE

July /August 2024



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

WRITTEN ASSESSMENT

TIME: 3 HOURS

INSTRUCTIONS TO CANDIDATES

1. The paper consists of TWO sections; A & B
2. You are provided with a separate answer booklet
3. Marks for each question are as indicated.
4. Do NOT write on the 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.
 - a) The following acronyms are commonly used in computer repair and maintenance. Write them in full
 - i. BIOS
 - ii. GPU
 - iii. CPU
 - iv. RAM(2 Marks)
 - b) From Q 1(a) above, explain the functions of:-
 - i. BIOS (1 Marks)
 - ii. CPU (1 Marks)
2. List FOUR occupational safety and health standards that should be followed when assembling and disassembling computer parts. (4 Marks)
3. Peter is a student at Makongeni Technical and Vocational College. He is always advised by his trainer to read the manufactures manual before doing any computer work. State FOUR reasons why it is important to read the manual. (4 Marks)
4. Students discovered that computers took long when booting. Highlight FOUR reasons why this delay occurs. (4 Marks)
5. Discuss TWO roles of diagnostic programs in computer maintenance and repair. (4 Marks)
6. While doing computer repair and maintenance, it is important to install updates. State FOUR reasons why it is necessary. (4 Marks)
7. Dan a student studying computer repair and maintenance has been approached by Alphonse to assist him assemble his newly acquired computer. Name TWO types of cables he will find in the package and explain their functions. (4 Marks)
8. Identifying a problem is a crucial step in the computer repair process, and it contributes significantly to finding an appropriate solution. Highlight FOUR reasons why this is crucial. (4 Marks)
9. When acquiring new computer parts, several major factors should be considered to ensure compatibility, performance and value. State FOUR such factors. (4 Marks)
10. Explain the difference between;
 - i. Bootstrapping (2 Marks)
 - ii. Bootloader (2 Marks)

SECTION B: 60 MARKS

Answer any THREE questions from this section.

11.

- a) Describe the procedure for generating detailed component and system reports following diagnostic tests on a computer system. (10 Marks)
- b) Detailed component and system reports following diagnostic tests provide stakeholders with valuable insights into the health and performance of the computer system. List essential components to include in the report. (5 Marks)
- c) Explain the importance of clear and concise reporting in effective computer maintenance. (5 Marks)

12.

- a) You have been invited to give a talk on troubleshooting to level 6 learners during a seminar at Ekeru TVC. Discuss FIVE advantages you would share on the role of establishing the theory of probable cause during the troubleshooting process in computer systems. (10 Marks)
- b) Disassembling faulty components in computer maintenance and repair requires careful handling to avoid further damage to the components or the computer system. Explain the procedures for safely disassembling faulty computer components. (10 Marks)

13. KCITI College realized they have a fairly increased number of students in ICT department. The HOD in that department asked an ICT Technician to make a requisition of additional Tools so as to fit the increased number of students. The following are some of the tools the Technician requested.



- a) State the names of the above tools and an alternative tool that can be used in each tool above
(8 Marks)
- b) From the Tools provided in (a) above explain their functions as used in computer maintenance and repair
(8 Marks)
- c) Highlight FOUR instances where replacing is better than repairing a computer component.
(4 Marks)

14.

- a) Discuss the environmental implications of the following maintenance techniques in computer repair.
 - i. Preventive Maintenance. (2 Marks)
 - ii. Corrective Maintenance. (2 Marks)
 - iii. Predictive Maintenance. (2 Marks)
- b) The Power-On Self-Test (POST) is a critical diagnostic process that occurs when a computer system is powered on. Examine the potential steps involved during the Power-On Self-Test process in a computer system. (12 Marks)
- c) Explain the difference between hardware and software in the context of computer repair and maintenance. (2 Marks)

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