061006T4ICT

ICT TECHNICIAN LEVEL 6

IT/OS/ICT/CR/6/6

PERFORM COMPUTER REPAIR AND MAINTENANCE

NOV/DEC 2023

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

WRITTEN ASSESSMENT

Time: 3 Hours

INSTRUCTIONS TO CANDIDATE

1. This paper has TWO sections A and B. Attempt questions in each section as per instructions given in the section.
2. You are provided with a separate answer booklet.
3. Marks for each question are indicated in the brackets.
4. Do not write on the question paper

This paper consists of 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 the questions in this section.

1. What is Computer repair and Maintenance? (2 Marks)

2. Standards for occupational safety and health (OSH) are essential for computer repair and maintenance because they safeguard technicians from potential risks at work, minimize accidents and injuries, and guarantee their well-being. Mention SIX occupational safety and health standards. (6 Marks)

3. Peter was troubleshooting a computer that had a hard disk failure. Mention FOUR possible causes of this problem. (4 Marks)

4. Computer chipsets offer several advantages that contribute to the efficient operation and performance of computer systems. What is a computer chipset? (2 Marks)

5. Maurine was required to list functions of computer's BIOS during a job interview. Outline FOUR functions she would have mentioned. (4 Marks)

6. The power supply unit (PSU) in a computer performs several critical functions that are essential for the proper functioning and performance of the system. List FOUR of such functions. (4 Marks)

7. Routine maintenance activities present a number of obstacles for computer specialists. Depending on the kind of computer systems they use and the particular setting, these difficulties may differ. Mention SIX common challenges that computer technicians face when carrying routine maintenance (6 Marks)

8. Disassembling faulty components is one essential element in computer repair and maintenance. State FIVE tools used for disassembling. (5 Marks)

9. Expansion slots on a motherboard allow for the installation of additional components and peripherals, enhancing the functionality and capabilities of the computer system. List THREE examples of expansion slots found on a motherboard. (3 Marks)

10. Several types of computer memory serve different purposes based on their unique characteristics. These memory types play essential roles in storing, accessing and managing data within a computer system. Differentiate between *volatile* and *non-volatile* memory as used in computer system. (4 Marks)

SECTION B: 60MARKS

Answer any THREE questions in this section.

11.

a) When hardware components malfunction, troubleshooting usually entails using a methodical approach to find and fix the problem. Explain FIVE keys steps one may follow to troubleshoot a malfunction hardware component.   (10 Marks)

b) A status report is an essential element when performing computer repair and maintenance. Discuss FIVE merits of status report to the technician.   (10 Marks)

12.

a) Joseph a student at a national polytechnic learnt that component testing is crucial in computer repair and maintenance. Analyze FIVE reasons why component testing is crucial.   (10 Marks)

b) The use of computer testing tools in normal maintenance can vary depending on the age, usage history and individual user requirements of the machine. Explain FIVE general guidelines that are considered before using computer testing tools.   (10 Marks)

13.

a) Reassembling a disassembled computer system following maintenance or repair is essential to guaranteeing proper system operation. Illustrate ten key aspects and best practices for a successful reassembly.   (10 Marks)

b) Elimination and the use of testing is one the crucial method that is employed by computer technicians to systematically identify probable causes and arrive at a more accurate diagnosis during maintenance and repair. Interpret FIVE key steps used by computer technicians.   (10 Marks)

14.

a) Joseck wanted to upgrade windows 10 on his laptop to windows 11. Discuss the correct procedure that he should follow.   (10 Marks)

b) Amani was required to replace a faulty RAM chip in a computer. Outline TEN precautions that she could observe in order to accomplish the task.   (10 Marks)

THIS IS THE LAST PRINTED PAGE