061006T4ICT

ICT TECHNICIAN LEVEL 6

IT/OS/ICT/CR/4/6

PERFORM ICT SYSTEM SUPPORT

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 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 questions in this section.

1. Outline THREE causes of hard disk failure in a computer. (3 Marks)

2. Differentiate between *preventive* and *pre-emptive* measures implemented during computer systems support. (4 Marks)

3. Mention TWO importance of Technical documentation in providing IT Support. (3 Marks)

4. Define the term troubleshooting as used in IT Support (2 Marks)

5. State FOUR importance of generating a test performance report after conducting a system test. (4 Marks)

6. There various ways of conducting an IT system audit. Outline THREE types of IT system audit. (3 Marks)

7. Categorize IT infrastructure into FOUR main classification groups. (4 Marks)

8. Explain the use of the following network diagnostic tools:

   a) Netstat; (2 Marks)

   b) Traceroute. (2 Marks)

9. Outline FOUR contributions of IT System audit as a measure to cyber security. (4 Marks)

10. Define the term ICT policy. (2 Marks)

11. Differentiate between *test incident* report and *test summary* report. (4 Marks)

12. Outline THREE safety precaution measures of ICT infrastructure against external environment. (3 Marks)

SECTION B: (60 MARKS)

Attempt any THREE questions in this section.

13.

a) You have been assigned as the lead ICT System Support Specialist in an organization that is undergoing a major system upgrade. The company's network infrastructure, comprising servers, routers and switches, needs to be seamlessly transitioned to the new system without disrupting daily operations. As part of your role, you are responsible for planning, implementing and ensuring the post-upgrade system support stability of the ICT infrastructure. Identify any FOUR activities you would take to execute a successful ICT system support and upgrade for the company's network infrastructure.   (8 Marks)

b) Mwangi, an IT intern, was informed by her supervisor that she must always lock the IT Server room when leaving. Discuss any FIVE reasons why such a directive is necessary.

(10 Marks)

c) Outline TWO benefits of troubleshooting a failed component before opting for its replacement.   (2 Marks)

14.

a) Discuss FIVE roles of ICT Policies in an organization.   (10 Marks)

b) Explain FIVE types of troubleshooting techniques used when performing ICT systems support.   (10 marks)

15.

a) Company X organized user training after installing a new technology. Explain FOUR benefits the company is likely to achieve from this.   (8 Marks)

b) Hardware performance test is usually done to establish efficiency and responsiveness of the hardware devices under different environment. Explain FOUR types of such test.

(8 marks)

c) Distinguish between *response time* and *throughput* as types of System Performance Analysis   (4 Marks)

16.

a) Implementing firewall is a fundamental step in establishing a secure network. Discuss FOUR importance of a firewall as a way of securing a network. (8 Marks)

b) Joash, an IT Technician listed internet connectivity as one of the major tools used in offering IT support. Discuss FOUR reasons for his action. (8 Marks)

c) You are an IT consultant tasked with implementing an end-user training plan for a medium-sized company that has recently adopted a new Customer Relationship Management (CRM) system. The goal is to ensure that all employees effectively utilize the CRM system to enhance customer interactions, streamline processes, and maximize the benefits of the technology. As the lead consultant, you are responsible for developing and implementing a comprehensive training plan. Mention any FOUR components of the end-user training plan. (4 Marks)

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