**061306T4CPM**

**COMPUTER PROGRAMMING LEVEL 6**

**IT/OS/CP/CR/01/6/A**

**UNDERSTAND COMPUTING BASICS**

**NOV/DEC 2023**

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

**CANDIDATE WRITTEN ASSESSMENT**

**TIME: 3 Hours**

**INSTRUCTIONS TO CANDIDATES**

1.  *The paper consists of **two** sections: **A** and **B***

2.  *Answer **ALL** questions in Section **A** and any **Three** from section **B***

3.  *Marks for each question are indicated in the brackets*

4.  *A separate answer booklet will be provided*

5.  *Do not write on the question paper*

***Candidates should answer the questions in English***

***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. Peter wanted to purchase a computer system. Mention FOUR hardware considerations he would consider. (4 Marks)

2. Differentiate between router and switch as used in a computer network. (4 Marks)

3. Distinguish between static and dynamic IP address in networking. (4 Marks)

4. In computing, data formats are the rules that define how data is structured and represented. List FOUR data formats in computing. (4 Marks)

5. Utility software can perform a wide range of tasks in a computer system. Explain TWO tasks performed by utility software. (4 Marks)

6. Mainframe computers are used by large organizations for critical applications. State FOUR features of Mainframe computers. (4 Marks)

7. Highlight TWO advantages of off the shelf software over in-house developed software.

   (2 Marks)

8. Data representation is the process of converting data into a format that can be stored. Give FOUR examples of how data representation is used in the real world. (4 Marks)

9. Explain THREE tools used in troubleshooting a network. (6 Marks)

10. Differentiate between EPROM and PROM as used in computer Memory. (4 Marks)

**SECTION B: (60 Marks)**

*(Answer any THREE questions in this section)*

11. Computing is a vast field that encompasses many different disciplines, including computer science, information technology, electrical engineering, and mathematics.

    (a) Explain FIVE emerging trends in computing. (10 Marks)

    (b) Discuss THREE major ethical issues faced by computing. (6 Marks)

    (c) State FOUR important areas of computing ethics. (4 Marks)

12.

    (a) Define the following computing terms. (4 Marks)

          i.    Protocol

         ii.    Network

    (b) State SIX benefits of computer networking. (6 Marks)

    (c) Describe FIVE types of computer networks. (10 Marks)

13. Hardware and Software are essential components in a computer system

    (a) Explain THREE hardware components in computing. (6 Marks)

    (b) Discuss TWO functions of a system software. (4 Marks)

    (c) Highlight FOUR ways of quantifying digital data in computing. (4 Marks)

    (d) Classify computers according to functionality. (6 Marks)

14.

    (a) Differentiate between a system and a computer system. (4 Marks)

    (b) Sarah was doing a presentation on the components of the CPU. Briefly explain

        THREE components that she presented. (6 Marks)

    (c)  Explain FIVE types of topologies in networking. (10 Marks)

**THIS IS THE LAST PRINTED PAGE**