

061306T4CSC

COMPUTER SCIENCE LEVEL 6

ICT/OS/CS/CR/01/6/A

ICT/OS/CS/CR/01/6/B

Understand Computer Organization and Architecture

July/August 2025



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

PRACTICAL ASSESMENT

DURATION: TO RUN THROUGHOUT THE TRAINING

INSTRUCTIONS TO CANDIDATES

1. You are required to perform the following tasks:

TASK 1: Identify and categorize of Hardware Components

TASK 2: Prescribe CPU, Memory, and I/O Device Specifications for a New User

TASK 3: Identify Specifications of a Computer

TASK 4: Prescribe memory specification

TASK 5: Recommend input and Output Devices

2. You have been provided with the following resources:

- i. *A working computer*
- ii. *Screwdriver*
- iii. *Anti-static gloves/bags/mat*
- iv. *Plain paper*

Task 1: Identify and categorize of Hardware Components

- i. Open and inspect a desktop.
- ii. Identify components
- iii. Create a table listing each component, its function, and interface

Task 2: Prescribe CPU, Memory, and I/O Device Specifications for a New User

An Office Assistant in the Human Resource (HR) Department works in a company with over 200 employees. Her role involves frequent use of office applications (e.g., Microsoft Word, Excel, PowerPoint), regular video conferencing via Zoom and Microsoft Teams, browsing the internet, responding to emails, and printing/scanning employee documents. Occasionally, she works with simple PDF editing software and saves files to shared folders via the company network.

Using the scenario above:

1. To analyse the office assistant's computing needs based on her work activities.
2. Prescribe appropriate specifications for:
 - CPU -speed, cores, generation
 - Memory-RAM size and type
 - Input/Output Devices
3. Present your specifications in a table format with the following columns:
 - Component
 - Recommended Specification

Task 3: Identify Specifications of a Computer

Explore and analyze the hardware specifications of an existing desktop.

You are required to perform the following tasks:

1. Identify and Record the Following Hardware Specifications:
 - Central Processing Unit (CPU):
 - Make and model
 - Clock speed (GHz)
 - Number of cores and threads
 - Memory (RAM):
 - Total installed memory
 - Memory type (DDR3, DDR4, etc.)

- Speed (MHz)
 - Storage:
 - Type (HDD/SSD)
 - Total capacity
 - Free space available
 - Motherboard Information:
 - Manufacturer and model
 - Graphics:
 - Integrated or dedicated
 - Graphics memory
 - Input/Output Devices:
 - Monitor resolution and size
 - Keyboard and mouse type
 - Interface type
2. Create a Summary Table:
- Organize the specifications in a clear table with headings: Component, Specification, Status/Comments.
 - Example entry:

Component	Specification	Status/comments

Task 4: Prescribe Memory specification

1. Identify and verify memory installed on a desktop machine:
 - RAM types
 - Typical RAM sizes
 - RAM speeds
 - Compatibility factors-slots, motherboard support, voltage
 - Create a Summary to document the information.

Task 5: Recommend Input and Output Devices

You have been hired as a junior IT technician at TechConnect Institute, an educational and administrative institution with diverse departments including administration, graphic design, software, and reception services.

The institution is in the process of upgrading its hardware and requires your assistance in recommending suitable Input and Output devices based on the specific tasks performed by various staff members in their roles.

You are required to analyze the roles and suggest I/O devices that will best support their day-to-day functions.

User Roles and Tasks:

1. Graphic Designer – Creative Department
 - Uses Adobe Photoshop and Illustrator daily.
 - Works on large resolution graphics.
 - Requires precision in input for digital illustrations.
2. Data Entry Clerk – Finance Department
 - Inputs large volumes of numeric and textual data.
 - Requires comfort and efficiency in typing.
 - Needs a dual-monitor setup for referencing spreadsheets.
3. Receptionist – Front Desk
 - Greets guests and inputs visitor information.
 - Handles basic document scanning and printing.
 - Manages appointments using scheduling software.
4. Software Developer – ICT Department
 - Writes and tests code regularly.
 - Performs debugging and version control.
 - Occasionally connects to virtual machines and remote servers.

Based on the scenario above:

- Recommend two appropriate Input and Output devices for each of the four roles.
- Prepare a well-organized Input/Output Specification Chart of the recommendations
- Explain reasons for your recommendations