**UGANDA INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY**

**END OF SEMESTER II EXAMINATIONS**

**RECESS 2024**

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|---|---|---|
| **DEPARTMENT** | : | **ICT** |
| **SEMESTER** | : | **TWO** |
| **PROGRAM** | : | **DIPLOMA IN COMPUTER SCIENCE** |
| **COURSE** | : | **COMPUTER HARDWARE & MAINTENANCE I** |
| **COURSE CODE** | : | **CE1201** |
| **DATE** | : | **JUNE 28, 2024** |
| **TIME** | : | **09:00 AM – 12:00 NOON** |
| **DURATION** | : | **3 Hours** |

## INSTRUCTIONS

- The paper consists of two Sections A and B
- Answer **ALL** questions in Section A and **ANY THREE** questions in Section B
- Credit will be given to relevant examples and illustrations
- Don Not Write anything on this question paper

**SECTION A [40 MARKS]:**

**Q1.** Which of the following is not an input device? **(2Marks)**

A. VDU
B. Keyboard
C. Monitor
D. Light Pen

**Q.2**. A light-sensitive device that converts the printed text, drawing, or other images into digital form is called ____.**(2Marks)**

A. Plotter
B. Printer
C. Scanner
D. OMR

**Q.3.** Sometimes the mouse pointer moves erratically. This is because of ___.**(2Marks)**

A. IRQ setting is not proper
B. The virus in the system
C. Mouse ball is dirty
D. The driver is not installed properly

**Q 4**. A specialized program that allows user to utilize in a specific application is classified as **(2Marks)**

A. Application programs
B. Relative programs
C. Relative programs
D. Replicate programs

**Q.5.** ____ is known as the translator for low-level programming language. **(2Marks)**

A. Compiler
B. Linker
C. Loader
D. Assembler

**Q.6.** Information travels between components to Motherboard through? **(2Marks)**

A. CMOS
B. Busses
C. Bays
D. Flash memory

**Q 7**. The data bus is ___ directional. **(2Marks)**

A. Single directional
B. Multi-directional
C. Bidirectional
D. None of the above

**Q.8**. Which is the secondary memory of the Data processing system? **(2Marks)**

A. CPU
B. Hard Disk
C. Floppy Disk
D. ALU

**Q.9.** How many bits are used in the data bus? **(2Marks)**

A. 7
B. 9
C. 8
D. 16

**Q.10**. Which command divides the surface of the blank disk into sectors and assign a unique address to each one. **(2Marks)**

A. Ver
B. Format
C. FAT
D. CHKDSK.

**Q.11** Which of the following is the MOST common reason for a computer to overheat? **(2Marks)**

a) Insufficient RAM
b) Outdated software
c) Blocked ventilation fans or dust buildup
d) Weak internet connection

**Q.12** When troubleshooting a computer that won't boot, the first step should be to: **(2Marks)**

a) Reinstall the operating system.
b) Upgrade hardware components.
c) Check for loose cables or faulty connections.
d) Run a virus scan.

**Q.13**. To safely replace a component inside a computer, you should: **(2Marks)**

a) Plug it in while the computer is running.
b) Use any available screwdriver, regardless of tip type.
c) Ground yourself to prevent electrostatic discharge (ESD).
d) Leave the old component inside the case.

**Q.14** Which of the following tools is NOT typically used for computer maintenance and repair? **(2Marks)**

a) Multimeter
b) Anti-static wrist strap
c) Power drill
d) Thermal paste

**Q.15.** When diagnosing a slow-performing computer, it's important to check for: **(2Marks)**

a) Damaged monitor
b) Unnecessary startup programs
c) Loose keyboard connection
d) All of the above (a, b, and c)

**Q.16** A symptom of a failing hard drive might include: **(2Marks)**

a) Blurry screen resolution
b) Inability to connect to Wi-Fi
c) Frequent freezing or unexpected shutdowns
d) Difficulty printing documents.

**Q.17**. To identify faulty hardware components, a technician might use a diagnostic tool called: **(2Marks)**

a) Word processor.
b) Spreadsheet software.
c) POST (Power-On Self-Test).
d) Web browser.

**Q.18**. When replacing a component inside a computer, it's important to: **(2Marks)**

a) Leave the screws loose for better airflow.
b) Use excessive force to ensure a secure fit.
c) Follow the manufacturer's installation instructions.
d) Touch all internal components to discharge static electricity.

**Q.19.** When cleaning the inside of a computer, it's important to: **(2Marks)**

a) Use a vacuum cleaner with high suction.
b) Apply water directly to the components.
c) Use compressed air to blow out dust.
d) Wipe down components with a damp cloth.

**Q.20.** Which of the following is NOT a preventative maintenance task for computers?**(2Marks)**

a) Regularly updating software and firmware.
b) Defragmenting the hard drive (applicable to HDDs, not necessarily the best practice on SSDs).
c) Overclocking the CPU (this actually increases stress on components)
d) Backing up important data.

**SECTION B: ATTEMPT THREE QUETSIONS**

1. a) Explain the purpose of the following devices:

i. Input device. **(4marks)**
ii. Output device. **(4marks)**
iii. Main memory. **(4marks)**

b) Explain the difference between application software and system software. **(4marks)**

c) Give two examples of application software and one example of system software **(4marks)**

2 a. Explain briefly the meaning of operating system in the computer system. (**4 Marks**)

b. Explain three phases taken by operating system during its installation (**6Marks**)

c. Discuss any five functions performed by the operating system residing on a computer. **(10Marks)**

3. State five factors to consider before purchasing application software. (**10 marks)**

b). Explain why motherboard is the first element to be installed in the process of assembling but the last one to be removed during the process of disassembling**?(10 Marks)**

4. You're a computer technician at a local repair shop on Kampala Road. A customer brings in their desktop PC complaining it's making a loud whirring noise.

a) What are some 3 potential causes of the noise? **(3 marks).**

**b)** How would you diagnose the problem? **(7 Marks)**

c) What are the possible five solutions? **(10 Marks)**

**5.** A student, Sarah, brings in her laptop complaining that it's shutting down unexpectedly and the fan is constantly running loudly.

a) What are some initial troubleshooting steps you could take to diagnose the problem? Explain any four. **(8 Marks)**

b) Based on your findings, you determine the laptop is overheating due to dust buildup. How would you explain the issue to Sarah and recommend a solution? **(8 marks).**

**c)** After cleaning the laptop, you run a stress test and the temperature remains within normal limits. What would you do next? **(4 Marks)**

***SUCCESS***