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KIRIRI WOMEN'S UNIVERSITY OF SCIENCE AND TECHNOLOGY
UNIVERSITY EXAMINATION, 2023/2024 ACADEMIC YEAR
FOR THE CERTIFICATE IN INFORMATION TECHNOLOGY
CIT 1006 – COMPUTER MAINTENANCE AND SUPPORT

Date: 14TH AUGUST 2023

Time: 2:30PM – 4:30PM

INSTRUCTIONS TO CANDIDATES

ANSWER QUESTION ONE (COMPULSORY) AND ANY OTHER TWO QUESTIONS

QUESTION ONE (30 MARKS)

- a) Define the following terms:
- i) Motherboard
 - ii) Case form factor
 - iii) Troubleshooting
 - iv) Chipset
 - v) Processor (5 Marks)
- b) The purpose of PC case is to hold all the basic computer components, to protect those components from dust and dirt, and to cool them. Identify any five major computer components which are housed inside the system case. (5 Marks)
- c) i) Identify four tools contained in a PC technician's toolkit. (4 Marks)
ii) Highlight the role of each of the tools identified in (i) above. (4 Marks)
- d) Describe four safety precautions that you are required to have in place before opening a system unit casing. (4 Marks)
- e) Assume you have been contracted as an IT specialist by an organization to maintain their computer laboratory. Describe four maintenance activities that you can undertake to improve the performance of those computers. (8 Marks)

QUESTION TWO (20 MARKS)

- a) All of the components of a computer directly or indirectly connect to motherboard. Describe the three ways in which components are connected to the motherboard. (6 Marks)
- b) Printers use either a Cartridge or a Toner for their printing purposes. Distinguish between the two. (2 Marks)
- c) Identify the common printer problems experienced within an organization (6 Marks)
- d) Highlight the troubleshooting procedure that you can undertake when a printer has experienced the problems discussed in (c) above. (6 Marks)

QUESTION THREE (20 MARKS)

- a) Highlight the step-by-step procedure for installing a new hard drive into a personal desktop computer. (4 Marks)
- b) Highlight the role of the following hardware components.
- i) BIOS
 - ii) CMOS battery

- iii) UEFI
- iv) Power supply unit (4 Marks)
- c) Describe the four main types of ROM chips that have been used in PCs today. (4 Marks)
- d) Identify four computer ports that support video (4 Marks)
- e) Describe four roles and responsibilities that a PC technician will play during the course of their career. (4 Marks)

QUESTION FOUR (20 MARKS)

- a) Identify the four main types of computers and describe the distinctive characteristics for each computer type. (8 Marks)
- b) Highlight the safety precautions that you are required to have in place before opening a system unit casing. (5 Marks)
- c) Discuss the role of the following computer buses:
 - i) Processor Bus
 - ii) Memory Bus
 - iii) Input Output Bus (3 Marks)
- d) Differentiate between the following connectors:
 - i) PATA Connectors and SATA Connector
 - ii) PS/2 and USB Connector (4 Marks)

QUESTION FIVE (20 MARKS)

- a) (i) Define the term Disk partitioning as applied in computer maintenance. (1 Mark)
(ii) Provide a comparison between the three common file systems that are used by PC operating systems today. (3 Marks)
- b) Highlight six reasons why Computer users are highly advised to maintain their computers on a frequent basis. (6 Marks)
- c) It is highly recommended to protect your PC from cyber-threats or Malware. State six best ways to prevent virus infections. (6 Marks)
- d) Distinguish between the following hard disk drive features. (4 Marks)
 - i) Capacity
 - ii) Performance
 - iii) Reliability
 - iv) Average Access Time