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KIRIRI WOMEN'S UNIVERSITY OF SCIENCE AND TECHNOLOGY
UNIVERSITY EXAMINATION, 2024/2025 ACADEMIC YEAR
FIRST YEAR, SECOND SEMESTER EXAMINATION
FOR THE DIPLOMA IN INFORMATION & COMMUNICATION TECHNOLOGY
DIT 1014 – COMPUTER MAINTENANCE AND SUPPORT

Date: 16TH April 2024
Time: 11:30AM – 1:30PM

INSTRUCTIONS TO CANDIDATES

ANSWER QUESTION ONE (COMPULSORY) AND ANY OTHER TWO QUESTIONS

QUESTION ONE (30 MARKS)

- a) Describe five factors that should be considered when selecting a power supply unit (5 Marks)
- b) Define the term mother boards, and discuss five major mother board form factors (6 Marks)
- c) Explain five major power supply unit connectors (5 Marks)
- d) Briefly describe the following monitor connectors and list 2 advantages of each
 - i) VGA (2 Marks)
 - ii) HDMI (2 Marks)
 - iii) DisplayPort (2 Marks)
- e) Sarah noted that some of her documents in her computer were encrypted and she was force to pay a certain amount of fee through internet to decrypt her files
 - i) Identify this type of attack (2 Marks)
 - ii) Describe three possible causes for the attack identified in (i) and how she mitigates against this attack in future (6 Marks)

QUESTION TWO (20 MARKS)

- a) Describe a process of uninstalling an application software in a windows operating system (5 Marks)
- b) You plan to purchase a high quality personal computer (PC), explain any five factors you would consider when placing order (10 Marks)
- c) You have been appointed to be a sales representative of ABC Computer Shop, where they deal with computer sales and various computer hardware devices. Explain to their clients the advantages of solid state drive(SSD) over magnetic hard drive (5 Marks)

QUESTION THREE (20 MARKS)

- a) Explain two circumstances under which an organization may use uninterruptable power supply unit (UPS) for computer systems (4 Marks)
- b) Paul was diagnosing a faulty motherboard, and found out it had bloated capacitors, explain three possible causes of this problem (6 Marks)
- c) Describe a process of creating hard disk new volume and how to encrypt the newly created volume (10 Marks)

QUESTION FOUR (20 MARKS)

- a) Describe each of the following types of hard disk interfaces
 - i) IDE (3 Marks)
 - ii) SATA (3 Marks)
- b) List four advantages of Unified Extensible Firmware Interface (UEFI) over Basic Input Output System. (4 Marks)
- c) You are a network administrator of newly started company and you have been tasked to design and implement a network for the main office. The company has four departments; administrators, accounting, sales and IT. You have been allocated a class C IP address 192.168.1.0/24. Subnet the network address into four subnets for each department and calculate the following.
 - i) Network address for each department. (4 Marks)
 - ii) The number of usable host addresses for each department. (3 Marks)
 - iii) Broadcast address for each department. (3 Marks)

QUESTION FIVE (20 MARKS)

- a) Patricia was required to troubleshoot a computer monitor that was not displaying the graphical interface after the POST. Outline four possible causes of the problem (4 Marks)
- b) John chose to use NTFS over FAT 32 file systems while preparing his disk. Outline four features of NTFS that could have influenced this choice (4 Marks)
- c) Explain two circumstances under which a computer user would use onscreen keyboard (4 Marks)
- d) Moses was troubleshooting a computer that had a hard disk failure. Describe four possible causes of this problem (8 Marks)