UGANDA BUSINESS AND TECHNICAL EXAMINATIONS BOARD

Business and Humanities Certificate Examinations

APRIL - MAY 2023 SERIES

PROGRAMME

NATIONAL CERTIFICATE IN INFORMATION AND COMMUNICATION TECHNOLOGY

PAPER NAME

BASIC COMPUTER MAINTENANCE

(THEORY)

PAPER CODE

NCIT222-1

YEAR II, SEMESTER II

2½ HOURS

TUESDAY, 9TH MAY, 2023

INSTRUCTIONS TO CANDIDATES

1. *This paper consists of **two** sections **A** and **B**.*
2. *Section **A** is compulsory and carries **20** marks.*
3. *Section **B** consists of **six** questions. Answer only **four** questions from this section.*
4. *All questions carry equal marks.*
5. *All answers to each question should begin on a fresh page.*
6. *All answers and rough work should be done in the official answer booklet provided.*
7. ***Do not** write on the question paper.*
8. *Read other instructions on the answer booklet.*

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SECTION A - (20 MARKS)

Answer all questions in this section.

Question One

(a) Distinguish between **hardware maintenance** and software **maintenance** as used in computing. (04 marks)

(b) State the functionality of the **power-on self-test** in a computer system. (02 marks)

Power-on self test is done to know if the computer is functioning or not.

(c) Identify **two** motherboard interface connectors that computer systems must possess, giving the functionality of each. (04 marks)

(d) Explain the functionality of **task manager** computer tool. (02 marks)

(e) Outline **two** benefits of formatting a disk. (02 marks)

(f) State **two** examples of ESD tools used during computer system repair. (02 marks)

(g) Differentiate between a **hard disk driver** and a **solid state drive**. (04 marks)

SECTION B - (80 MARKS)

Answer only four questions in this section.

Question Two

Jordan's computer system suddenly stopped working one morning when he booted it. A lot of assumptions ran in his mind on what could have happened to his system. He eventually contacted you as competent person in repairing and maintaining such systems to help him solve the problem(s).

(a) Differentiate for him between cold **booting** and warm **booting**. (04 marks)

(b) Explain **three** reasons that could have led to problem(s). (06 marks)

(c) Discuss **five** maintenance tips that should be practiced to ensure that the problem(s) in 2(b) don't repeat themselves. (10 marks)

Question Three

(a) Define the term **maintenance** as used in computing. (02 marks)

(b) James' computer system fell down during a maintenance routine and this caused the **motherboard** of the system to get damaged beyond repair, as a technician.

(i) Discuss **four** functions of the board in 3(b) to the system. (08 marks)

(ii) Assuming you were tasked with replacing the damaged board with a known working one, Explain the steps that you would follow to successfully make the replacement. (10 marks)

Question Four

(a) Differentiate between **software errors** and **hardware errors** with regards to computers. (04 marks)

(b) Rita's computer system was replaced with a new tested and working wireless card but due to unknown reasons. The card could not work on her system as expected. She sought for help from you to perform the known troubleshooting technique(s) and solve issue.

(i) Discuss **four** reasons why the card might have failed to work. (08 marks)

(ii) Explain the steps that the technique(s) in 4(b) follows in order system issue to be resolved. (08 marks)

Question Five

(a) Differentiate between a **computer repair** and a **computer upgrade.** (04 marks)

(b) Angela, a professional graphics designer, is interested in upgrading her current **Windows 7** laptop unit to the latest version of the Windows operating system. This is majorly due to her desire to use the latest graphics design software's that can only possibly run on the latest windows system. Assuming Angela consulted with you on her interest.

(i) Explain the steps you would follow to upgrade her unit to the latest system. (08 marks)

(ii) Discuss **four** hardware components, including their functionality that would be upgraded to suit the latest version of the operating system. (08 marks)

Question Six

(a) Distinguish a **computer troubleshooting** from a **computer maintenance**. (04 marks)

(b) Explain **six** basic steps to be followed while troubleshooting a personal computer. (12 marks)

(c) Excessive heat can cause a significant decrease in computer performance. As a Computer Technician, explain **two** ways through which you can avoid this.(04 marks)

Question Seven

Gordon a Trainee at JMZ Computer-Point was tasked with installing a new operating system on a client's laptop. But before he could perform the installation, it was required of him to first perform a **back-up** operation on all the client's data.

(a) Examine **three** types of the operation in 7(a) that Gordon would choose from when dealing with the client's data. (06 marks)

(b) Explain the set of procedures that would be followed to successfully perform the operation in 7(a). (08 marks)

(c) *Discuss **three** functions of the system in 7(a) to the laptop.* *(06 marks)*

END