CICT PART I SECTION 2

COMPUTER SUPPORT AND MAINTENANCE

WEDNESDAY: 19 May 2021.   Time Allowed: 3 hours.

Answer ALL questions. Marks allocated to each question are shown at the end of the question.

QUESTION ONE

(a)   Distinguish between "hardware faults" and "hardware conflicts" in the context of computer support and maintenance.   (4 marks)

(b)   Sarah receives automated software updates on her laptop regularly over the internet.

Required:
Highlight four roles of software updates.   (4 marks)

(c)   Explain the importance of each of the following activities when troubleshooting a customer's personal computer:

     (i)   Interviewing the user.   (2 marks)

     (ii)   Analysing the problem.   (2 marks)

(d)   Paul Mossi suspects that the processor of his computer is failing:

Required:
     (i)   Suggest two possible causes of processor failures.   (2 marks)

     (ii)   Outline six steps that he should follow in replacing the faulty processor.   (6 marks)
                                             (Total: 20 marks)

QUESTION TWO

(a)   Explain the following features of computer memory:

     (i)   Buffered memory.   (1 mark)

     (ii)   Single sided memory.   (1 mark)

     (iii)   Dual-voltage memory.   (1 mark)

(b)   List five factors to consider when planning memory installation and upgrade.   (5 marks)

(c)   Suggest four methods of cooling microprocessors in a computer.   (4 marks)

(d)   Describe the term "Digital Rights Management (DRM)" as used in computer software security.   (2 marks)

(e)   Explain the steps of removing malware programs from a computer system.   (6 marks)
                                             (Total: 20 marks)

QUESTION THREE

(a)   A customer care officer in a bank might spend long hours on a computer attending to customers' requests.

Required:
Analyse three health problems that he is likely to experience.   (6 marks)

(b)   Explain three functions of buses on the computer motherboard.   (6 marks)

(c)   Marion Cheche plugged a flash disk in a USB port of her laptop but it was not detected since it was not listed in "my computer devices".

Required:

(i)   Propose two possible causes of the above problem.   (2 marks)

(ii)   Advise her on three methods of troubleshooting the problem.   (6 marks)
(Total: 20 marks)

QUESTION FOUR

(a)   Examine two ways of performing each of the following:

(i)   Protect yourself, the computer hardware and software against power problems while repairing a computer to fix computer component problems.   (4 marks)

(ii)   Protect hard drives and disks.   (4 marks)

(b)   (i)   Explain the importance of ensuring that the computer case and the motherboard share a compatible form factor.   (2 marks)

(ii)   You should not open the case of a computer on warrant. Highlight how you can determine if the computer has ATX or BTX form factor without opening the case.   (2 marks)

(c)   Distinguish between "selective backup" and "real-time backup" as used in computers.   (4 marks)

(d)   (i)   State two reasons why it is not advisable to disassemble a computer power supply unit.   (2 marks)

(ii)   Explain the danger of disassembling a CRT monitor.   (2 marks)
(Total: 20 marks)

QUESTION FIVE

(a)   Describe each of the following computer power supply unit terminologies:

(i)   Wake-on-LAN (WOL).   (2 marks)

(ii)   Switched power supply.   (2 marks)

(iii)   Over-voltage protection.   (2 marks)

(b)   A monitor gives an excellent view when viewed by two or three users. However, you might need to use a projector when displaying output to a larger group of people.

Required:

(i)   Outline three features you would consider when selecting a projector.   (3 marks)

(ii)   Write a step by step procedure of installing a projector.   (3 marks)

(c)   Differentiate between "native monitor resolution" and "supported monitor resolution".   (4 marks)

(d)   John Mwanzo is trying to troubleshoot a computer and is seeking for help.

Required:

Advise him on four sources of troubleshooting information that he could consult.   (4 marks)
(Total: 20 marks)

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