



MACHAKOS UNIVERSITY

University Examinations for 2020/2021 Academic Year

SCHOOL OF ENGINEERING AND TECHNOLOGY

DEPARTMENT OF COMPUTING AND INFORMATION TECHNOLOGY

SECOND YEAR SECOND TERM EXAMINATION FOR

CERTIFICATE IN INFORMATION TECHNOLOGY

COMPUTER MAINTENANCE & SUPPORT

DATE: 4/6/2021

TIME: 8.30-11.30 AM

INSTRUCTIONS

Answer question one in section A and any four questions in section B

SECTION A

QUESTION ONE (32 MARKS)

- a) Outline two floppy disk form factors. (4 marks)
- b) Explain two advantages of a bar code reader as a computer input device. (4 marks)
- c) Compare and contrast the following pairs of computer maintenance and support terms.
 - i. ROM and EPROM (4 marks)
 - ii. SRAM and DRAM (4 marks)
 - iii. CD ROM and CD RW (4 marks)
- d) Explain the use of the following computer maintenance/servicing tools. (4 marks)
 - i. Flat-head screwdriver
 - ii. Compressed air
- e) Tim has two computers, one with a processor labelled Core i3 and the second Core i7. State two technical advantages that the processor labelled Core i7 would have? (4 marks)
- f) Define the following terms as used in computers. (2 marks)
 - i. Clock speed
 - ii. Fan
- g) Assuming that you have been tasked with importing computer processors. Outline two of the specifications that you are required to provide other than the speed in hertz. (2 marks)

SECTION B

QUESTION TWO (17 MARKS)

- a) Define the term, computer hardware inventory in regard to computer maintenance. (1 mark)
- b) Explain three components in a computer motherboard. (6 marks)
- c) Explain the significance of a computer hardware inventory. (2 marks)
- d) Contrast the following pairs of terms in relation to computer maintenance.
 - i. Spike and brownout (4 marks)
 - ii. Computer assembly and Computer disassembly (4 marks)

QUESTION THREE (17 MARKS)

- a) Write in full the following acronyms and explain their meaning.
 - i. DIMM (2 marks)
 - ii. SIMM (2 marks)
 - iii. RIMM (2 marks)
 - iv. FAT (2 marks)
- b) Explain the function(s) of the following computer components.
 - i. Heat sink (2 marks)
 - ii. Expansion slot (3 marks)
 - iii. Network interface card (2 marks)
 - iv. Battery (2 marks)

QUESTION FOUR (17 MARKS)

- a) Outline two power supply form factors. (4 marks)
- b) State two factors to consider when purchasing a processor. (2 marks)
- c) Clean X is a company mandated by the government to collect old and dead computers and related accessories from schools and colleges to avoid environmental degradation. State three ways in which the company may handle these devices. (4 marks)
- d) Identify four types of processor sockets. (4 marks)
- e) Outline three examples of hard disk interfaces (3 marks)

QUESTION FIVE (17 MARKS)

- a) Identify two threats to computer systems and one control measure for each of the threats you have identified. (4 marks)
- b) Identify three categories of computer maintenance and support hardware tools. (3 marks)

- c) State two factors to consider when selecting a power supply unit other than cost. (2 marks)
- d) Outline two power supply protection devices. (2 marks)
- e) Identify two circumstances Uninterruptible Power Supply (UPS) would be used with a computer system. (2 marks)
- f) Explain the following disk management tools;
 - i. Scandisk (2 marks)
 - ii. Disk clean-up (2 marks)