



MACHAKOS UNIVERSITY

University Examinations 2021/2022

SCHOOL OF ENGINEERING AND TECHNOLOGY

DEPARTMENT OF COMPUTING AND INFORMATION TECHNOLOGY

FIRST YEAR FIRST SEMESTER EXAMINATION FOR

CERTIFICATE IN INFORMATION COMMUNICATION TECHNOLOGY

CODE 1920/106: OPERATING SYSTEM

DATE:

TIME: 8:30-10:30 AM

INSTRUCTIONS:

Answer ANY FIVE (5) questions

Don't write on this question paper

QUESTION ONE (20 MARKS)

- a) Define the term “*Information Communication Technology* as used in today’s life. (2 marks)
- b) Juma, a student in MksU intends to buy a laptop and has approached you for advice. Describe **three** factors that will determine the cost of the laptop. (6 marks)
- c) Outline **four** forms in which computers can input, process and output data. (4 marks)
- d) Tuko Mbele is on a mission to purchase new software for their use in their company. Other than cost, explain any **four** factors they should consider when purchasing the programs. (8 marks)

QUESTION TWO (20 MARKS)

- a) A college student who had paid full fees for the semester received his computer printed fees statement, and on observing it, he realised that it showed that he still had a balance of Ksh 2000. When he approached the finance officer for clarification, he was told that it was a computer error. As a computer expert, account for this phenomenon. (4 marks)
- b) Outline **six** characteristics of Fourth Generation Computers. (6 marks)
- c) With the coming of the information age, many jobs have been replaced by computers or automated machines such as robots. Describe **two** measures in which the trend can be encountered to ensure that workforce is retained on productivity basis. (4 marks)

- d) Explain **three** functions of an operating system. (6 marks)

QUESTION THREE (20 MARKS)

- a) Differentiate between *impact* and *non –impact* printers. (4 marks)
- b) Outline **four** factors to be considered when selecting a printer (4 marks)
- c) Describe the following types of computers
- a. Super computers (2 marks)
 - b. Minicomputers (2 marks)
 - c. Microcomputers (2 marks)
- d) Illustrate and briefly describe the information processing cycle (6 marks)

QUESTION FOUR (20 MARKS)

- a) Differentiate between a *flash memory* and *compact disk* as used in computers. (4 marks)
- b) Machakos University has automated most of its operations. Describe **three** benefits derived from this move. (6 marks)
- c) State any **two** categories of input devices giving an example in each case. (2 marks)
- d) Describe the main components of the *central processing unit*. (8 marks)

QUESTION FIVE (20 MARKS)

- a) Explain the **two** types of primary storage/memory. (4 marks)
- b) Giving **two** examples in each case, differentiate between Soft copy output and Hard copy output in relation to computers (4 marks)
- c) Explain each of the following terms as used in computer software:
- a. *Compatibility*;
 - b. *Portability*. (4 marks)
- d) The operating systems are continuously evolving. Explain **two** ways of coping with this trend. (4 marks)
- e) Andre intends to acquire a flat panel visual display unit for her computer, describe **two** types she could choose from. (4 marks)

QUESTION SIX (20 MARKS)

- a) Explain **four** negative impacts of ICT in a society. (8 marks)
- b) Explain each of the following types of operating systems stating the most appropriate area where it could be applied:
- a. *Real time operating system*;
 - b. *Distributed operating system*;
 - c. *Network operating system*. (6 marks)
- c) The I.C.T personnel within Machakos University have noted with concern that the spread of computer virus within the campus is alarming:-
- a. Define the term *computer virus* (2 marks)
 - b. Outline any **four** possible sources of computer virus within the institutions computers (4 marks)