



# MACHAKOS UNIVERSITY

University Examinations for 2022/2023

SCHOOL OF ENGINEERING AND TECHNOLOGY

DEPARTMENT OF COMPUTING AND INFORMATION TECHNOLOGY

SECOND YEAR FIRST SEMESTER EXAMINATION FOR

BACHELOR OF SCIENCE (CLOUD COMPUTING AND INFORMATION  
SECURITY)

BACHELOR OF EDUCATION

SIT 180: COMPUTER AND SOCIETY.

DATE:

TIME:

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## INSTRUCTIONS

Answer Question ONE and other TWO Questions

### QUESTION ONE (COMPULSORY) (30 MARKS)

- a) The Kenyan Government is yet to implement the laptop project in all Primary Schools, what would be your advice to the Ministry of Education in regard to:
- The importance of ICT in your area of study. (2 marks)
  - Factors to be considered before the implementation of the project. (2 marks)
  - The impact of this project to the teacher and the learner. (4 marks)
  - The challenges that the project is likely to face after implementation. (3 marks)
- b) Identify the function of each of the ports shown below:



i.



ii.

(4 marks)

c) The phrase “fitness for purpose” is often used when assessing the quality and suitability of a new IT system. The international standard ISO 9126 sets out standard characteristics by which software quality can be measured. List FIVE of those characteristics. (5 marks)

d) Classify the following as either system software or application software. (4 marks)

*Ms windows*

*Ms word*

*Coreldraw*

*Norton antivirus*

e) Suppose your friend George has applied to be employed by XYZ limited as a deployment project manager to oversee the deployment process of an ICT solution. Explain six ethical skills set that George should possess. (6 marks)

### QUESTION TWO (20 MARKS)

a) Give four applications of Biometric Technology. (4 marks)

b) Using ICT, the attendance registration of school pupils can now take place in numerous different ways. Give two reasons why a school may replace a paper-based registration system. (2 marks)

c) Identify and give three advantages of the device that can be used to read data below. (4 marks)



d) Outline the circumstance under which each of the following option could be the most applicable during software installation

i. Upgrade (2 marks)

ii. Repair (2 marks)

e) A student found a loophole in the university computer’s security system that allowed him access to other students’ records. He told the system administrator about the loophole, but continued to access others’ records until the problem was corrected two weeks later.

Explain the three general categories of such unethical and illegal behavior.

(6 marks)

### QUESTION THREE (20 MARKS)

- a) Emerging technologies are changing the way we lead our lives at home and in school, and are changing the environment in which we live. Describe two emerging technology used in schools and provide an advantage of this technology. (4 marks)
- b) Explain the function of each of the following keyboards keys:  
i. Num lock;  
ii. Escape ; (4 marks)
- c) Discuss what roles can legislature and technology tools play in protecting the individual privacy of internet users. (4 marks)
- d) Distinguish between *Wi-Fi* and *Bluetooth* as used in computer networks. (4 marks)
- e) Describe each of the following types of computers, stating an area of application for each:  
i. Super computers;  
ii. Mini computers (4 marks)

#### QUESTION FOUR (20 MARKS)

- a) Differentiate between RAM and ROM as used in computers. (2 marks)
- b) Outline **one** function in each of the following tools as used in networking  
a. Crimping tool (2 marks)  
b. LAN tester (2 marks)  
c. RJ 45 (2 marks)
- c) Joyce attended a seminar that focused on the measure's computer users could adopt in order to conserve the environment. Explain three of the measures that could have been discussed. (6 marks)
- d) Undergraduate student at Machakos University are required to develop unique and innovative systems in their area of competence. Explain three ways that intellectual property is protected. (6 marks)

#### QUESTION FIVE (20 MARKS)

- a) Moses is an ICT consultant at the Triple Company. He has advised the company to purchase *off the shelf software* to install on their new computers. Explain **three** reasons that may have contributed to this advice. (6 marks)
- b) Data on transit is as insecure as data that is resident on a computer server. Describe how one can protect their data from the intruders and hackers. (5 marks)
- c) Mercy works in an environment where power fluctuates. Explain two ways in which she would safeguard loss of documents created in computer. (4 marks)
- d) Many organizations are not convinced that information technology can deliver significant competitive advantage. The reason that computer technology may be necessary for them to

run their businesses but the technology is equally available to all and has little impact on their competitive position. Criticize this statement. (5 marks)