



(Knowledge for Development)

KIBABII UNIVERSITY

**UNIVERSITY EXAMINATIONS
2020/2021 ACADEMIC YEAR**

**END OF SEMESTER EXAMINATIONS
YEAR ONE SEMESTER ONE EXAMINATIONS**

**FOR THE DEGREE OF
BACHELOR OF SCIENCE COMPUTER SCIENCE**

COURSE CODE : CSC 114

**COURSE TITLE : INTRODUCTION TO COMPUTING
ESSENTIALS I**

DATE: 16/02/2021 TIME: 02:00 P.M – 04:00 P.M

INSTRUCTIONS TO CANDIDATES

ANSWER QUESTIONS ONE AND ANY OTHER TWO.

QUESTION ONE [COMPULSORY] [30 MARKS]

- a. Describe different activities that a computer can perform. [3 Marks]
- b. Explain three different devices that can be found in a network stating their roles in data communication. [6 Marks]
- c. Illustrate the correct order of the operations that a computer does. [4 Marks]
- d. Differentiate between the following: [4 Marks]
- i. Primary storage and secondary storage
 - ii. Motherboard and keyboard
- e. Show the distinction between the following: [6 Marks]
- i. Analog and digital computers
 - ii. Impact and non impact printers
 - iii. LCD and gas plasma monitors
- f. Using a diagram, explain the different components of the CPU. [7 Marks]

QUESTION TWO [20 MARKS]

- a. Explain in details the generations of computers. [10 Marks]
- b. Why is a computer often referred as a system? [2 Marks]
- c. Give three classifications of parallel lines that a bus can interconnect devices. [6 marks]
- d. Differentiate between the two classifications of computer registers. [2 marks]

QUESTION THREE [20 MARKS]

- a. i. What is a semiconductor memory? [2 Marks]
- ii. Explain in details two types of semiconductor memory. [4 marks]
- b. Define the following:- [3 Marks]
- i. Internet
 - ii. Computer network
 - iii. Topology

- c. Explain four important characteristics of a computer that make it distinct from human beings. [4 Marks]
- d. Differentiate between system and application software [2 marks]
- ii. Explain the role of system software in a computer. [5 Marks]

QUESTION FOUR [20 MARKS]

- a. What is cache memory? [1 mark]
- b. Buses provide interconnection channels. Describe three uses of such channels. [3 marks]
- c. Convert the following numbers:
 - i. 101012 to Decimal [3 marks]
 - ii. 29_{10} to Binary [3 marks]
 - iii. 10101_2 to Octal [3 marks]
- d. Explain the different benefits of internet to a society. [4 Marks]
- e. Describe at least three services which can be provided by internet to a local shopkeeper at Kibabii trading center. [3 Marks]

QUESTION FIVE [20 MARKS]

- a. With reasons, describe the best network topologies to be used in the following areas:
 - i. Cyber café [4 marks]
 - ii. Traffic monitoring centre for Nairobi city. [4 marks]
- b. Differentiate between multiprogramming and multiprocessing. [2 Marks]
- c. i. What are interrupts? [1 mark]
- ii. Describe four sources of interrupts. [4 marks]
- d. Detail three types of operating systems. Give at least one example of each. [3 marks]
- e. Illustrate your understanding of translators by describing two types. [2 marks]