(Knowledge for Development)

KIBABII UNIVERSITY

UNIVERSITY EXAMINATIONS
2021/2022 ACADEMIC YEAR

SPECIAL/SUPPLEMENTARY 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: 20/07/2022   TIME: 08:00 A.M – 10:00 A.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. 10101_2 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]