(Knowledge for Development)

KIBABII UNIVERSITY

UNIVERSITY EXAMINATIONS
2022/2023 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**
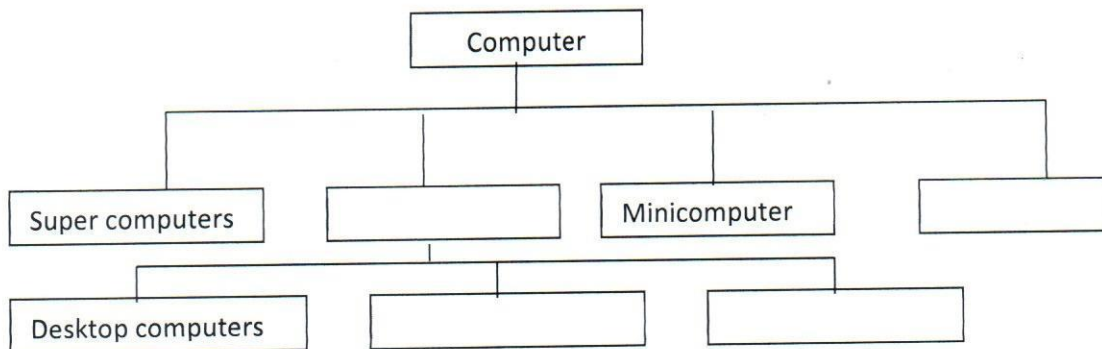
DATE: 15/12/2022   **TIME: 09:00 A.M – 11:00 A.M**

INSTRUCTIONS TO CANDIDATES
ANSWER QUESTIONS ONE and ANY OTHER TWO.

QUESTION ONE (COMPULSORY) [30 MARKS]

a. The cost of a computer is one of the key factors to consider when buying one. State the factors that determine the price of a computer. [3 marks]

b. State any three advantages that flat screen displays have over the conventional cathode ray. Terminals displays [3 marks]

c. Name any four resources under the control of an operating system [4 marks]

d.   (i)   What are computer buses as used in ICT [1 mark]

     (ii) Name any two types of computer buses [2 marks]

e. Write the following abbreviations is fully as used in computer studies

   i)   RAM [1 mark]

   ii)   EEPROM [1 mark]

   iii) POST [1 mark]

f. The figure below shows classification of computers according to size and processing power. Fill in the missing boxes. [2 marks]

g. Give any three differences between interpreters and compliers as seen in language translation [3 marks]

h. Convert the decimal number 0.375 into binary form [3 marks]

i. State any two advantages that the integration of the Internet with the mobile phone as likely to bring about [2 marks]

j. List three differences between Wide Area Network (WAN) and Local Area Networks (LAN). [3 marks]

k. Differentiate between the following:

   i.   Primary storage and secondary storage [2 marks]

   ii.   Motherboard and keyboard [2 marks]

QUESTION TWO [20 MARKS]

a. Explain in details the generations of computers. [10 marks]

b. Using a diagram, explain the different components of the CPU. [7 marks]

c. State the three types of system software [3 marks]

QUESTION THREE [20 MARKS]

a. Convert the following hexadecimal number $1A_{16}$ to

    (i) Decimal [2 marks]

    (ii) Binary [2 marks]

    (iii)Octal [2 marks]

b. Define the following:

    i. Internet [1 mark]

    ii. Computer network [1 mark]

    iii. Topology [1 mark]

c. Explain four important characteristics of a computer that make it distinct from human beings. [4 Marks]

d. i. 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. Accuracy and Speed are some of the advantages of using computers in banking. Discuss FOUR other advantages of use of computers in banking. [4 marks]

b. Convert the following numbers:

   i. $(10101)_2$ to Decimal [3 marks]

   ii. 32_{10} to Base 3 [3 marks]

   iii. 10101101_2 to Hexadecimal [3 marks]

c. Explain the different benefits of internet to a society. [4 marks]

d. Describe at least three services which can be provided by internet to a local shopkeeper at Kanduyi trading center. [3 marks]

QUESTION FIVE [20 MARKS]

a. With reasons, describe the best network topology that can used in Cyber café at Kibabii University [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. Give the acronym name for the following

   i)   BCD [1 mark]
   ii) EBCDIC [1 mark]

f. Convert 32.25 to Binary [4 marks]