(Knowledge for Development)

KIBABII UNIVERSITY
(KIBU)

UNIVERSITY EXAMINATIONS
2022/2023 ACADEMIC YEAR

END OF SEMESTER EXAMINATION
YEAR ONE SEMESTER ONE examination

FOR THE DEGREE OF
(INFORMATION TECHNOLOGY)

COURSE CODE : BIT 112

COURSE TITLE : INFORMATION TECHNOLOGY FUNDAMENTALS

DATE: 22/12/2022   **TIME: 2.00 P.M – 4.00 P.M**

INSTRUCTIONS TO CANDIDATES

ANSWER QUESTIONS ONE AND ANY OTHER TWO.

QUESTION ONE (30 MARKS) [COMPULSORY

a. Define the following terms: [4 marks]

    i.   Information

    ii.   Nibble

    iii. Program

    iv. Operating system

b. Explain why a computer is termed as a data processor.   [2 marks]

c. Explain the essence of having cache memory despite its small size.   [2 marks]

d. Describe the term computer system.   [4 marks]

e. Determine the decimal equivalent of the hexadecimal number $(1E0.2A)_{16}$ [3 marks]

f. Describe the attributes of a system.   [3 marks]

g. State the functions of the main memory.   [3 marks]

h. Describe the parameters for measuring operating systems performance.   [3 marks]

i. Contrast between intranet and extranet.   [6 marks]

QUESTION TWO (20 MARKS)

a. Explain why an INTEL processor can-not function on a machine initially operating using an AMD processor.   [2 marks]

b. Contrast between overflow and truncating computer errors.   [2 marks]

c. Differentiate between special purpose registers and general purpose registers.   [2 marks]

d. Outline FOUR reasons for shifting from manual to Electronic Data Processing.

[4 marks]

e. Outline FOUR attributes of good information [4 marks]

f. The computer system uses a unique system to perform arithmetic operations. From the first principles, explain how a computer will perform the arithmetic operation on $(+37 - 18)_{10}$ [6 marks]

QUESTION THREE (20 MARKS)

a. Briefly describe the different types of ROM. [5 marks]

b. With the aid of examples, discuss the THREE main methods of data processing. [6 marks]

c. Discuss the THREE main types of processor architecture, stating their attributes and application. [9 marks]

QUESTION FOUR (20 MARKS)

Computer technology has advanced over several decades in terms of hardware technologies, software technologies and characteristic features. Discuss these advancements. [20 marks]

QUESTION FIVE (20 MARKS)

With the aid of a diagram, discuss the basic computer organization parts and the different operations performed by each part. [20 marks]