



(Knowledge for Development)

**KIBABII UNIVERSITY
(KIBU)**

MAIN CAMPUS

UNIVERSITY EXAMINATIONS

SPECIAL/SUPPLEMENTARY EXAMINATION

2021/2022 ACADEMIC YEAR

FIRST YEAR FIRST SEMESTER EXAMINATION

**FOR THE DEGREE OF BACHELORS OF SCIENCE IN
(INFORMATION TECHNOLOGY/ COMPUTER SCIENCE)**

COURSE CODE: BIT 112

COURSE TITLE: INFORMATION TECHNOLOGY FUNDAMENTALS

DATE: 19/07/2022

TIME: 2.00 P.M. – 4.00 P.M.

2HRS

INSTRUCTIONS TO CANDIDATES:

ANSWER QUESTIONS ONE AND ANY OTHER TWO.

Paper Consists of 4 Printed Pages. Please Turn Over ►

QUESTION ONE [COMPULSORY] [30 MARKS]

a. Define the following terms :

- | | | |
|------|-------------|------------------|
| 1. | Register | [2 Marks] |
| II. | Peripheral | [2 Marks] |
| III. | Compiler | [2 Marks] |
| IV. | Information | [2 Marks] |
| v. | Byte | [2 Marks] |

b. Explain the term computer network to your colleague. **[3 Marks]**

c. State and explain any three resources that an operating system manages **[6 Marks]**

d. Briefly detail three functions of the Utility programs in a computer. **[3 Marks]**

e. Carry out the following arithmetic calculations:

1. $5724_8 + 3654_8$ **[2 Marks]**

II. $1111011_2 + 1010111_2 + 1101111_2$ **[2 Marks]**

- f. With examples, differentiate between computer hardware and computer software, stating the function of each. **[4 Marks]**

QUESTION TWO [20 MARKS]

- a. State and explain any five benefits that your institution can get by using the Internet. **[5 Marks]**
- b. Based on the area of coverage discuss three physical sizes of computer networks. **[9 Marks]**
- c. Describe six risks that an organization installing a computer network faces after completion of the installation. **[6 Marks]**

QUESTION THREE [20 MARKS]

- a. What is a computer system? **[2 Marks]**
- b. Discuss the different generations of computers. **[10 Marks]**
- c. Give four operations of CPU that make it important in a computing system. **[4 Marks]**
- d. Differentiate between System software and operating system. **[4 Marks]**

QUESTION FOUR [20 MARKS]

- a. Define computer booting [2 Marks]
- b. Explain different types of booting. [4 Marks]
- c. Explain the different types of programming language that are used in computing? [6 Marks]
- d. Detail the use of the following in computing:
- i. Compiler. [2 Marks]
 - ii. Assembler. [2 Marks]
 - iii. Interpreter. [2 Marks]
- e. Differentiate between RAM and ROM [2 Marks]

QUESTION FIVE [20 MARKS]

- a. What are the basic operations of computer? [2 Marks]
- b. Modern computers operate on stored program concept. The control unit is designed to execute the stored program. Identify and explain FIVE tasks of control unit. [10 Marks]
- c. Give your understanding of the term general-purpose computers [4 Marks]
- d. Detail different ways that can be used to improve data security in a computing environment of a public secondary school. [4 Marks]