



(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 : KUC 112

**COURSE TITLE : FUNDAMENTALS OF
COMPUTING**

DATE: 22/02/2021 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) Define the following terms. [5 marks]
- (i) Information
 - (ii) Input
 - (iii) Memory
 - (iv) Computer programs
 - (v) Digitizing
- b) Differentiate between random access and sequential access giving examples in each case. [2mks]
- c) State FOUR major technological developments that led to the evolution of computers. [4mks]
- d) Outline the phases of the CPU instruction cycle. [3mks]
- e) Convert the binary number 1101101 [4mks]
- f) With examples, differentiate between hard copy and soft copy. [3mks]
- g) Differentiate between a bit and a byte. [2mks]
- h) What are differences and similarities between a mainframe computer and a personal computer? [7mks]

QUESTION TWO [20 MARKS]

- a) Briefly explain FOUR reasons why you would ask an organization to network its computing resources. [4mks]
- b) Name any TWO input devices and any TWO output devices. [2mks]
- c) Convert the following to binary number system. [4mks]
- (i) 34
 - (ii) 64_8
- d) Outline FOUR differences between RAM and ROM. [4mks]
- e) Explain any FOUR areas the internet has widely been used. [6mks]

QUESTION THREE [20 MARKS]

- a) Briefly explain any FOUR characteristics of computers. [4mks]
- b) Differentiate between application software and utility software. [1mk]
- c) Convert the following numbers:
 - (i) 324_{10} to its Octal [4mks]
 - (ii) 1101101001_2 to hexadecimal number system [3mks]
- d) Briefly outline any FOUR software and the type of task you would accomplish while using them in school. [8mks]

QUESTION FOUR [20 MARKS]

- a) Define a computer network. [1mk]
- b) Briefly state and explain any THREE types of networks that you know. [3mks]
- c) Briefly explain why you would advice a school to network their computers and get connected to the internet. [7mks]
- d) If your teacher asked you to write a paper using a computer, how would the following help you? *ROM, RAM, Application software, storage devices.* [4mks]
- e) State any TWO advantages of star topology. [2mks]
- f) Convert 540_{10} to its binary equivalent [3mks]

QUESTION FIVE [20 MARKS]

- a) With examples, differentiate between hardware and software components of a computer. [3mks]
- b) Explain the THREE functions of the processor in a personal computer. [3mks]
- c) Differentiate between a mini computer and a micro processor. [1mk]
- d) Explain the THREE commonly used data representation schemes in computers. [6mks]
- e) Differentiate between; networked computers and stand alone systems [2mks]
- f) Briefly describe the procedure involved in preparing the hard disk for installation of an operating system. [5 marks]