KIBABII UNIVERSITY

UNIVERSITY EXAMINATIONS
2017/2018 ACADEMIC YEAR

END OF SEMESTER EXAMINATIONS
YEAR ONE SEMESTER ONE EXAMINATIONS

FOR THE DEGREE OF BACHELOR
OF EDUCATION – SCHOOL BASED

Course code : CSC 110
Course title : FUNDAMENTALS OF COMPUTING

DATE: 06/12/2018 TIME: 3:00 P.M – 5:00 P.M

INSTRUCTIONS TO CANDIDATES

Answer Questions ONE and ANY OTHER TWO.
QUESTION ONE [30 MARKS]
a. Define the following terms and concepts as used in the study of computing:
   i. Computer system
   ii. Utility software
   iii. CPU

   [3 marks]

b. Discuss the main technological improvement in the FIRST and FOURTH generations
   of computer

   [4 marks]

c. Discuss two general categories of software.
   Give two examples of each category stating what the software is used for.

   [4 marks]

d. Differentiate between the following with examples:
   i. Hardware and Software
   ii. Softcopy and Hardcopy

   [2 marks]

e. Using relevant examples, discuss various computer classifications.

   [8 marks]

f. Convert 111100011 to its decimal equivalent

   [5 marks]

QUESTION TWO [20 MARKS]
a. Using von Neumann architecture illustrate the structure of the computer

   [6 marks]

b. Convert 258 to its binary equivalent

   [4 marks]

c. i. What is meant by term Operating System?
   ii. Can a computer system able to work without an installed operating system? Discuss
       four major functions that an operating system plays in a computer.

   [2 marks]

   [8 marks]

QUESTION THREE [20 MARKS]
a. Using relevant examples discuss various types of scanners

   [4 marks]

b. Explain the three fundamental units of the Central Processing Unit (CPU).

   [4 marks]

c. State the FOUR basic number Systems used in computer to store data.

   [2 marks]

d. Evaluate 01100_2 + 100101_2

   [4 marks]
e. Discuss, using relevant examples, various computer hardware. [6 marks]

**QUESTION FOUR [20 MARKS]**

a. Solve the following:

$$A_{16} + B_{16}$$ [3 marks]

b. Convert the following numbers as directed:-

   i. $232_{10}$ to octal number system [3 marks]
   ii. $11101100011_{2}$ to Hexadecimal [3 marks]
   iii. $EA5_{16}$ to binary number system [3 marks]
   iv. $753_{8}$ to binary number system [3 marks]

c. Describe FIVE benefits an organization will get when it networks its resource [5 marks]

**QUESTION FIVE [20 MARKS]**

a. Differentiate between the following concepts as used in Network and data communication

   i. Internet and WWW [2 marks]
   ii. Network and Network Topology [2 marks]

b. Discuss any THREE Types of Network used in Kenya [6 marks]

c. Using a suitable illustration, explain any TWO types of network Topology [4 marks]

d. Discuss the negative impact of the Internet to the young people in Kenya [6 marks]