

SS



*(Knowledge for Development)*

**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**

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**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.
- [4 marks]
- Give two examples of each category stating what the software is used for.
- [2 marks]
- d. Differentiate between the following with examples:
- i. Hardware and Software
  - ii. Softcopy and Hardcopy
- [2 marks]
- [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?
- [2 marks]
- 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.
- [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]