

CHUKA



UNIVERSITY

UNIVERSITY EXAMINATIONS

**FIRST YEAR EXAMINATION FOR THE AWARD OF CERTIFICATE IN
COMPUTER SCIENCE**

COSC 00101: COMPUTER SYSTEMS AND ORGANIZATION

STREAMS: CERT COMP SCI.

TIME: 2 HOURS

DAY/DATE: MONDAY 15/04/2019

8.30 A.M -10.30 A.M

INSTRUCTIONS:

- Answer question **ONE** and **TWO** other questions
- Do not write anything on the question paper
- This is a **closed book exam**, no reference materials are allowed in the examination room
- There will be **NO** use of mobile phones or any other unauthorized materials
- Write your answers legibly and use your time wisely.

SECTION A: ANSWER ALL QUESTIONS IN THIS SECTION

Question one (30 marks)

- a. Convert 5746_8 to decimal number [3 marks]
- b. Define the following terms [8 marks]
- BIOS
 - SOFTWARE
 - Assembler
 - virtual storage in operating system
- c. What are the steps in data processing cycle? [3 marks]
- d. What are the different file access methods? [3 marks]
- e. LIST computers CLASSIFIED BY SIZE [4 marks]

- f. What is the Booting Process? EXPLAIN the TWO Types of booting?
[5 marks]
- g. Difference between data and Information and GIVE Examples of each.[4 marks]

SECTION B-SELECT ANY TWO QUESTIONS IN THIS SECTION

Question two (20 marks)

- a. CONVERT FOLLOWING: [10 marks]
- i. 3AB2 TO BINARY [2 marks]
 - ii. 0.375 base 10 TO BINARY [2 marks]
 - iii. Compute 1^{st} and 2^{nd} complements of the following binary: 11010110. [2marks]
 - iv. 985FDA TO BASE 10 [2 marks]
 - v. Convert 6.1_8 to decimal number [2 marks]
- vi. Explain three main types of system buses [6 marks]
- vii. What is ASCII, list 3 sections that make up ASCII table [4 marks]

Question three (20 marks)

- a. Discuss Advantages And Disadvantages Of Computers in modern society [10 marks]
- b. Define CPU and EXPLAIN parts of CPU [10 marks]

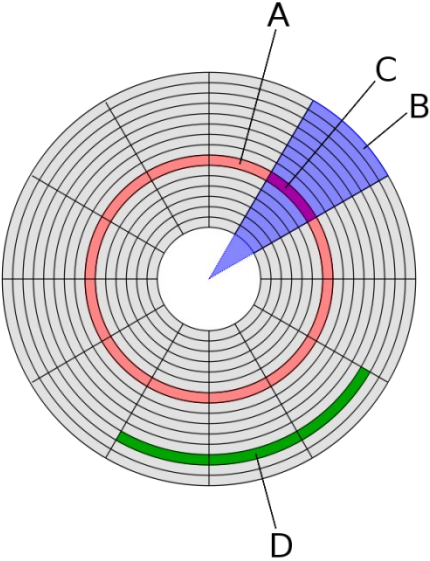
Question four (20 marks)

- a. Differences Between DRAM and SRAM [5 Marks]
- b. Differences RAM and ROM [5 Marks]
- c. FIVE Differences between Primary and Secondary Memory [10 marks]

Question five (20 marks)

- a. Define following Measurements in Computer Science [12 Marks]
- Bit (Binary Digit)
 - Byte
 - Kilobyte
 - Megabyte
 - Gigabyte
 - Terabyte

b. EXPLAIN THE FOLLOWING Disk Sector [8 marks]



- A.
- B.
- C.
- D.
