

CHUKA



UNIVERSITY

UNIVERSITY EXAMINATIONS

FIRST YEAR EXAMINATION FOR THE AWARD OF DEGREE OF BACHELOR  
OF SCIENCE IN COMPUTER SCIENCE

COSC 103: INTRODUCTION TO COMPUTER APPLICATIONS

STREAMS: BED (ARTS, SCIENCE) Y1S1, Y1S2, BPSM Y2S2 TIME: 2 HOURS

DAY/DATE: FRIDAY 14/12/2018

2.30 P.M. – 4.30 P.M.

INSTRUCTIONS:

- Answer question 1 and any other two.

SECTION A: Answer all questions in this section

QUESTION ONE (30 Marks)

- Explain any **THREE** routine activities you would carry out on general computer maintenance tasks to improve on its performance. [3 marks]
- State and explain any **FOUR** factors that you would consider when acquiring computer hardware for an organization. [4 marks]
- Outline any **THREE** symptoms of a computer infected by a virus. [3 marks]
- Differentiate between by the following terms:
  - Software and Data [2 marks]
  - Hardware and Information. [2 marks]
- Graphical user interfaces display applications in interfaces simply called windows. Explain any **TWO** parts of a typical window. [4 marks]
- Define utility software and describe any **TWO** such software. [4 marks]
- Differentiate between the Binary and Hexadecimal number systems in digital computers describing the purpose for each. [4 marks]
- Convert the  $A9F_{16}$ 
  - To its Decimal equivalent. [2 marks]
  - To its Binary equivalent. [2 marks]

SECTION B (Answer any TWO questions from this section)

Question Two (20 marks)

- With the aid of a labeled diagram, discuss the logical organization of a computer system. [4 marks]

- b) Differentiate between network Protocols and Topologies as used in computer networks giving **TWO** examples for each. [4 marks]
- c) Discuss any **THREE** functions of the operating system. [6 marks]
- d) Outline the comparison between Main and Secondary memory. [4 marks]

**Question Three (20 marks)**

- a) Discuss any two application areas of computers today. [4 marks]
- b) Given a range of numeric values in an electronic worksheet say **B4:B10**.
  - i. Write a Function to compute the maximum value in the range. [2 marks]
  - ii. Write a formula to compute the average of the values. [2 marks]
- c) Describe **THREE** major features each for Spreadsheet applications and Word Processors that make them suitable for their functions. [6 marks]
- d) Discuss **THREE** approaches to consider in protection of data and applications in a computer. [6 marks]

**Question Four (20 marks)**

- a) Giving reasons, describe the most appropriate scheme for acquiring software to be used in supporting organizational functions such as payroll management. [4 marks]
- b) Explain the different classification of computers according to purpose. [4 marks]
- c) Discuss any **THREE** social impacts of the internet. [6 marks]
- d) Define the term computer virus explaining any three common types. [6 marks]

**Question Five (20 marks)**

- a) Outline any **FOUR** reasons for having computer networks. [4 marks]
  - b) Discuss any **THREE** features of spreadsheet applications. [6 marks]
  - c) Briefly describe the components of the CPU giving the functions for each component. [6 marks]
  - d) Compare and contrast software suite and integrated software. Explain appropriate examples of each. [4 marks]
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