

CHUKA



UNIVERSITY

UNIVERSITY EXAMINATIONS

FIRST YEAR EXAMINATION FOR THE AWARD
OF BACHELOR OF ELECTRICAL ENGINEERING

COSC 113: COMPUTERS FOR ENGINEERING APPLICATIONS

STREAMS: BSC (ELECTRICAL & ELECTRONIC ENGINEERING) TIME: 2 HOURS

DAY/DATE: WEDNESDAY 10/4/2019

2.30 P.M. – 4.30 P.M.

INSTRUCTIONS:

- Answer question **ONE** and **TWO** other questions
- Sketch maps and diagrams may be used whenever they help to illustrate your answer
- 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

QUESTION 1: (30 MARKS)

- a. Explain the following terms (5 marks)
- Information technology
 - System clock
 - Database Management System
 - File format
 - System Software
- b. Describe briefly the difference between word processing software and spreadsheet software (3

Marks)

- c. Explain how to perform the following tasks in Microsoft Office document:
- Bold text (2 Marks)
 - Insert header on a document (2 Marks)
- d. Discuss the application of IT in Electrical Engineering (5 marks)
- e. List three advantages of using a graphical user interface (3 Marks)

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- f. Briefly, discuss what is Internet? Explain two roles of the internet in enhancing business performance in Engineering. (4 Marks)
- g. Discuss three methods for accessing files (6 Marks)

QUESTION TWO

- a. What is operating system software? Discuss clearly the functions of operating systems software (6 Marks)
- b. Explain four requirements for connecting to the internet (4 Marks)
- c. Define the following disk performance terms. (4 Marks)
- a. Access time
 - b. Seek time
 - c. Transfer time
 - d. Latency
- d. Explain how data is organized in a disk (6 Marks)

QUESTION THREE

- a. Acquiring any Software need critical review and planning since the cost of IT investment is very high to the organization. Briefly describe four of the factors you would consider when planning to acquire a software. (8 marks)
- b. What are the various alternatives that an organization can use to acquire an information system? (6 marks)
- c. Explain how you carry out the following transactions in spreadsheet (3 Marks)
- i. Insert blank cell
 - ii. Insert row

QUESTION FOUR

- a. Explain the security concerns brought about by information technology to individuals, organizations and society. (6 marks)
- b. What is a virus? Explain measures that one should take to control the spread of viruses and protective measures to take to prevent one from being attacked by them (5 Marks)
- c. Discuss three functional capabilities of database systems (6 Marks)
- d. List problems associated with file systems (3 Marks)

QUESTION FIVE

- a. Computers have evolved through many generations over the years. State and explain the five generations the computers have evolved through (5 marks)
- b. Differentiate between RAM and ROM. (4 marks)
- c. Explain the term form factor in relation to mother boards (3 marks)

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- d. Define the term computer Architecture and discuss the various Sub categories of Computer Architecture (8 marks)
