CHUKA   **UNIVERSITY**

UNIVERSITY EXAMINATIONS

RESIT/SPECIAL

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

COSC 0100: INFORMATION TECHNOLOGY AND NATIONAL DEVELOPMENT

STREAMS: DIP. COMP SCI (Y1S2)   **TIME: 2 HOURS**

DAY/DATE: MONDAY 01/02/2021   **2.30 P.M. – 4.30 P.M.**

INSTRUCTIONS:
   • **Answer question one and any other two from section B**
   • **Do not write on this paper**

SECTION A {(COMPULSORY)

QUESTION ONE [30 MARKS]

a. Explain any six benefits of e-commerce over traditional business.   (6 marks)

b. Differentiate proprietary software from freed and open source software (FOSS) and give

   an examples in each of the category.   (4 marks)

c. Differentiate between computer hardware and computer software.   (1 mark

d. Discuss **TWO** negative effects of hacking to national development   (4 marks)

e. What is a web browser? List at least **FOUR** different web browsers that are Available for

   use by interested parties.   (5 marks)

f. Computers have evolved through generations over the year's .list any **TWO**

   characteristics of the first generation computers.   (2 marks)

g) Joram's computer recently started carrying out normal processes in a very unfamiliar

   manner .upon being checked by a technician ,it was stated that it had a virus.

      i. Define the term computer virus.   (1 mark)

ii. List four ways of recognizing viruses (4 marks)

iii. Three ways of avoiding viruses (3 marks)

(h) List at least five strategies contained in the Geneva Action Plan which African Heads of

(i) States and Governments agreed to and signed WSIS in December 2003 (5 marks)

(j) What are the five basic characteristics of information society (5 Marks)

SECTION B

QUESTION TWO (20 MARKS)

National security is important to any country. In Kenya, National security is necessary to achieve both Kenya Vision 2030 and the MDGs. Discuss **ANY THREE** contributions of IT to the achievement of National Security. (6 marks)

Explain the impact of computers and technology in the following fields.

i. Education (2 marks)

ii. Health (2 marks)

iii. Business (2 marks)

iv. Tourism (2 marks)

b) What is network topology? With the aid of diagrams, explain any **TWO** topologies possible in computer networks (6 marks)

QUESTION THREE (20 MARKS)

a) Discuss any three impacts of ecommerce to the society (6 marks)

b) Differentiate between data and information (3 marks)

c) Identify any two indicators of National Development and explain how Information Technology may play a role in each. (6 marks)

d) Discuss how information influences change in the society. (5 marks)

QUESTION FOUR (20 MARKS)

a) Discuss **THREE** contributions of IT to each of the following:

i. National Health (3 marks)

ii. Economy of a country (3 marks)

b) Differentiate between system software and application software and give an example in each case. (2 marks)

c) Describe what is an operating system in a computer (8 marks)

d) Discuss 4 main functions of the operating system in a computer (8 marks)

e) What is Data Security? Discuss different ways in which we can ensure data security. (4 marks)

QUESTION FIVE (20 MARKS)

a) What are digital villages? (2 marks)

b) Discuss the benefits of digital villages to National Development in Kenya (6 marks)

c) Explain the role of IT in the digital villages. (2 marks)

d) Discuss in detail how ICT can be used to achieve Goal 5 of the MDGs (10 marks)