

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]

- Explain any six benefits of e-commerce over traditional business. (6 marks)
- Differentiate proprietary software from freed and open source software (FOSS) and give an examples in each of the category. (4 marks)
- Differentiate between computer hardware and computer software. (1 mark)
- Discuss **TWO** negative effects of hacking to national development (4 marks)
- What is a web browser? List at least **FOUR** different web browsers that are Available for use by interested parties. (5 marks)
- Computers have evolved through generations over the year's .list any **TWO** characteristics of the first generation computers. (2 marks)
- 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.

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- 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)

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- 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)
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