

CHUKA



UNIVERSITY

UNIVERSITY EXAMINATIONS

FIRST YEAR EXAMINATION FOR THE AWARD OF DIPLOMA IN COMPUTER SCIENCE

COSC 0100: INFORMATION TECHNOLOGY AND NATIONAL DEVELOPMENT

STREAMS:

TIME: 2 HOURS

DAY/DATE: MONDAY 20/09/2021

11.30 A.M – 1.30 P.M

INSTRUCTIONS

• **Answer question one and any other two from section B**

SECTION A {compulsory}

QUESTION ONE [30 MARKS]

- a) Define the following terms: (8 marks)
- i. Social media
 - ii. Computer Software
 - iii. High level language
 - iv. Computer Network
- b) Explain the role of IT in the digital villages. (3 marks)
- c) Explain the difference between MDGs and SDGs. (4 marks)
- d) State FOUR signs of a computer infected by a virus. (4 marks)
- e) Define the term network topology. (2 marks)
- f) list two function of the operating system (2marks)
- g) List two examples of web browsers (2marks)
- h) Differentiate between computer hardware and computer software. (1 mark).
- i) List two objectives of the Digital talent program (2marks)
- j) List two branches of artificial intelligence (2marks)

SECTION B

QUESTION TWO (20 MARKS)

- a) Explain in summary the Kenya Vision 2030 (6 marks).
- b) Differentiate between the following terms
 - i. Bitcoin and Block chain (4marks)
 - ii. Intranet and Extranet (4marks)
 - iii. Anonymisation and encryption (4marks)
- c) Explain TWO traits that a technology professional should have. (2 marks)

QUESTION THREE (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 four advantages of computer networks (8marks)
- d) Explain the negative effects of social media on education (4marks)

QUESTION FOUR (20 MARKS)

- a) Explain what an ICT policy is and explain FIVE effects of national ICT policy to the citizens. (7 marks)
- b) Explain FIVE benefits of having a national ICT policy. (10 marks)
- c) Explain how ICT has been applied in the health sector. (3 marks)

QUESTION FIVE (20 MARKS)

- a) Regulatory Approaches Advances in AI have been accompanied by increased scrutiny and debate over whether AI should be regulated in Kenya. Discuss four risks associated with the use of Artificial intelligence (8marks)
- b) Explain what is ICT Authority and describe the FIVE main functions of ICT Authority (7 marks)
- c) Information Security department is under ICT Authority, state its FIVE functions. (5 marks)
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