

CHUKA



UNIVERSITY

UNIVERSITY EXAMINATIONS

FIRST YEAR SECOND SEMESTER EXAMINATION FOR THE AWARD  
OF BACHELOR OF SCIENCE COMPUTER SCIENCE

COSC 100: INFORMATION TECHNOLOGY AND NATIONAL DEVELOPMENT

STREAMS: BSC. COMPUTER SCIENCE

TIME: 2 HOURS

DAY/DATE: FRIDAY 12/4/2019

11.30 A.M. – 1.30 P.M.

**INSTRUCTIONS:**

- Answer Question **ONE** and any other **TWO** questions.
- Diagrams should be used whenever they are relevant to support an answer.
- 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

**SECTION A**

ANSWER ALL THE QUESTIONS IN THIS SECTION

**QUESTION ONE [30 MARKS]**

- a) Explain what development means [2 Marks]
- b) Differentiate between data, information and knowledge [6 Marks]
- c) Identify and describe any three projects namely Kenya Vision 2030 flagship projects [6 Marks]
- d) Explain any four ways through which computer networks encourage national development [4 Marks]
- e) List and describe the MDGs [8 Marks]
- f) Julie wants to install Application software on her computer. Highlight four categories of application software that she could install [4 Marks]

**SECTION B**

**ANSWER ANY TWO QUESTIONS FROM THIS SECTION**

**QUESTION TWO [20 MARKS]**

- a) ICT policy should be defined and appropriately enforced to ensure efficient utilization of ICT in an organization.
- i. Explain what an ICT policy is [2 Marks]
  - ii. Describe in detail any four contents of an ICT policy [8 Marks]
  - iii. Explain three enforcement measures that could be used to ensure adherence to the policy [6 Marks]
- b) Discuss how ICT can be used to achieve Goal 6 of the SDGs [4 Marks]

**QUESTION THREE [20 MARKS]**

- a) Mary presented in a workshop a presentation on “Stress Management to ICT staff”. Explain three stress management strategies that she could have highlighted [6 Marks]
- b) Explain the role of primary keys when designing a Database Application [4 Marks]
- c) Daniel is in charge of ICT in a certain Organization. In a meeting he communicated to ICT staff that the Organization has been advised to procure proprietary software from then hence forth.
- i. Outline five benefits the Organization could realize from use of proprietary software [5 Marks]
  - ii. Outline five disadvantages the Organization is likely to face by adapting proprietary software [5 Marks]

**QUESTION FOUR [20 MARKS]**

- a) Giving real examples, describe four applications areas of ICTs in healthcare [4 Marks]
- b) Highlight the pillars of Kenya Vision 2030 and describe each in brief [6 Marks]
- c) Discuss with reasons the role of Fiber Optic implementation to National Development in Kenya [10 Marks]

**QUESTION FIVE [20 MARKS]**

- a) Discuss five impacts on innovation hubs to National development [10 Marks]
- b) Briefly highlight the role of the UN in development [4 Marks]
- c) Discuss the role a Computer Scientist could play to achieve Goal 13 of the SDGs [6 Marks]