

CHUKA



UNIVERSITY

**UNIVERSITY EXAMINATIONS**

**FIRST YEAR EXAMINATION FOR THE AWARD OF DEGREE OF  
BACHELOR OF SCIENCE COMPUTER**

**COSC 100: INFORMATION TECHNOLOGY AND NATIONAL DEVELOPMENT**

**STREAMS: BSC (COSC) YIS2**

**TIME: 2 HOURS**

**DAY/DATE: THURSDAY 09/04/2020**

**8.30 PM – 4.30 PM**

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**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 the relationship between GDP and National development. [4 Marks]
- b) Differentiate between developed, developing and undeveloped countries. [3 Marks]
- c) The Ministry of ICT in Kenya is the umbrella body in matters related to Information Technologies. Briefly explain any four functions of this ministry that drive National development. [4 Marks]
- d) To ensure that economic, social and political governance gains made under the Vision are neither reversed nor lost as a result of change in ruling parties there are eight governance principles adhered to. Identify and explain each of these principles. [8 Marks]

- e) Explain what is meant by Agenda 4. Consequently, identify and explain the constituents of Agenda 4. [7 Marks]
- f) ICT and IT are both terms used in the field of computer science. Differentiate between them. [4 Marks]

## **SECTION B**

### **ANSWER ANY TWO QUESTIONS FROM THIS SECTION**

#### **QUESTION TWO [20 MARKS]**

- a) The Kenya Vision 2030 focuses on reforms and development across 10 key sectors. Describe each of the sectors giving one real life example for each. [10 Marks]
- b) A certain Organizations wants to develop an ERP system for their operations. They are seeking advice on the choice of the development platform for the implementation
- i. Explain why Organizations need ERP systems [4 Marks]
  - ii. Advice the Organizations why Proprietary software may be a platform of consideration for the build [3 Marks]
  - iii. Advice the Organization why Open Source software may be the platform of consideration for the build [3 Marks]

#### **QUESTION THREE [20 MARKS]**

- a) The Political pillar is one of the pillars of the Vision 2030
- i. Explain what the Political pillar hopes to achieve by year 2030 [2 Marks]
  - ii. Describe in brief each of the strategic objectives of the political pillar [10 Marks]
- b) Describe the Sustainable Goal 7. Consequently, discuss three ways Computer Science could be used to enable achievement of the goal. [8 Marks]

#### **QUESTION FOUR [20 MARKS]**

- a) There are different government institutions playing one role or another towards National development. One of these is the Kenya National Bureau of Statistics (KNBS). Identify any five functions of KNBS explaining how each of the function affects development. [10 Marks]

- b) An Organization is considering whether to access their in-house system through wireless network or wired network.
- i. Advice the Organization why they should consider wired over wireless network [3 Marks]
  - ii. Advice the Organization why they should consider wireless over wired network [3 Marks]
- c) Highlight how IT could help in the alleviating climate change effects [4 Marks]

**QUESTION FIVE [20 MARKS]**

- a) In the National ICT Policy, the government recognizes the important economic role of data centers across different sectors of the country.
- i. Highlight any two ways through which data centers positively encourage development [2 Marks]
  - ii. List and describe any five strategies adopted by the National ICT policy towards encouraging data centers in the economic development [10 Marks]
- b) Explain each of the following Intellectual Properties in reference to computer science
- i. Patents [2 Marks]
  - ii. Trade Secrets [2 Marks]
  - iii. Copyrights [2 Marks]
  - iv. Trade Mark [2 Marks]
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