

CHUKA



UNIVERSITY

SUPPLEMENTARY / SPECIAL EXAMINATIONS

**FIRST YEAR 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: WEDNESDAY 18/11/2020

8.30 A.M - 10.30 A.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 QUESTIONS IN THIS SECTION

QUESTION ONE [30 MARKS]

- a) Briefly explain what National Development entails. [4 Marks]
- b) Differentiate between the terms ICT and IT [4 Marks]
- c) Describe each of the following malware:
- i. Virus [2 Marks]
 - ii. Worms [2 Marks]
 - iii. Trojans [2 Marks]

- d) List and explain any four ways Artificial Intelligence can be used to develop the Agricultural Sector of Kenya [8 Marks]
- e) List and describe each of the MDGs [8 Marks]

SECTION B

ANSWER ANY TWO QUESTIONS FROM THIS SECTION

QUESTION TWO [20 MARKS]

- a) Explain in detail how IT can be used to achieve goal 3 of the SDGs [5 Marks]
- b) Highlight the Ajira digital initiatives project [4 Marks]
- c) Discuss how computer scientists can effect national development through the ajira.go.ke initiative [6 Marks]
- d) Microsoft Windows Operating System and Microsoft Office applications for office have been more widespread used by a typical user as compared to the Open Source software of the same nature. Discuss. [5 Marks]

QUESTION THREE [20 MARKS]

- a) Giving actual examples, identify any five real life initiatives taken by the government of Kenya as a response to the political pillar of the Kenya Vision 2030 [10 Marks]
- b) Highlight any three social engineering tactics used by hackers [6 Marks]
- c) Giving one example for each, differentiate between phishing and pharming [4 Marks]

QUESTION FOUR [20 MARKS]

- a) Describe the relationship between the MDGs and the SDGs [5 Marks]
- b) Classify each of these projects as per the Pillar of the Vision 2030 they belong to as well as giving a brief description of their functions and role in development:
 - i. Huduma Centers 3 Marks]
 - ii. Free Primary and Secondary Education [3 Marks]
 - iii. Linda Mama [3 Marks]

- c) Julie is a beginner computer user. She wants to install Application software on her computer for a typical office user. Highlight any six categories of application software that she could install [6 Marks]

QUESTION FIVE [20 MARKS]

- a) Describe Goal 17 of the SDGs. [2 Marks]

- b) Explain initiatives put in place by the Government of Kenya in response to Goal 17 in a bid to enable an environment for Computer Science research [5Marks]

- c) 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 that the policy is followed [3 Marks]

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