



MACHAKOS UNIVERSITY

University Examinations for 2021/2022

SCHOOL OF ENGINEERING AND TECHNOLOGY

DEPARTMENT OF COMPUTING AND INFORMATION TECHNOLOGY

FIRST YEAR SPECIAL / SUPPLEMENTARY EXAMINATIONS FOR

BACHELOR OF SCIENCE (CLOUD COMPUTING AND SECURITY)

SCC 130: INTRODUCTION TO CYBER SECURITY

DATE: 25/8/2022

TIME: 8.30-10.30 AM

INSTRUCTIONS:

Answer Question ONE and any other TWO Questions

QUESTION ONE (30 MARKS)

- a) Define the following terms (8 marks)
- b) Implementation of a strong cyber security posture is faced with major challenges. Discuss FOUR bottlenecks with regard to this statement. (8 marks)
- c) Discuss FOUR measures how internet users can implement wireless security. (8 marks)
- d) Discuss TWO methods an attacker can acquire user passwords in an information system. (4 marks)

QUESTION TWO (20 MARKS)

- a) Explain two types of attacks and suggest how they can be countered. (4 marks)
- b) Explain FOUR security functional requirements to enable the organization attain a strong security posture. (8 marks)
- c) Discuss FOUR security design principles to consider in cyber security. (8 marks)

QUESTION THREE (20 MARKS)

- a) Discuss THREE factors contributing to cybercrime in the world. (6 marks)
- b) Online buying has gained immense adoption and this has opened new avenues for cybercrime. Explain to online shoppers FOUR safety measures to consider when buying online. (8 marks)
- c) Explain THREE cybercrimes as recognized by the Cyber Crime Act in Kenya. (6 marks)

QUESTION FOUR (20 MARKS)

- a) Explain THREE malware and how they can be addressed in a system. (6 marks)
- b) Cyber security aims to achieve THREE major goals. Discuss these goals giving relevant scenarios where necessary. (6 marks)
- c) As a frequent consumer of email service, discuss FOUR security tips to apply to remain secure. (8 marks)

QUESTION FIVE (20 MARKS)

- a) You have been tasked with the responsibility of implementing security in your organization. Discuss FOUR elements of security implementation. (8 marks)
- b) Logical security is enough to offer the needed security in information system. Discuss the validity of this statement with respect to integrated security. (6 marks)
- c) Briefly explain the functioning of a firewall. (2 marks)
- d) Differentiate between Trojan Horse and a Ransomware. (4 marks)