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(KNOWLEDGE FOR DEVELOPMENT)

**KIBABII UNIVERSITY
(KIBU)**

**UNIVERSITY EXAMINATIONS
2021/2022 ACADEMIC YEAR**

**END OF SEMESTER EXAMINATIONS
FIRST YEAR SECOND SEMESTER**

**FOR MASTER OF SCIENCE DEGREE IN
(INFORMATION TECHNOLOGY)**

COURSE CODE: MIT 822

COURSE TITLE: INFORMATION SECURITY MANAGEMENT

DATE: 1/10/2022 TIME: 9.00 AM- 12.00 NOON

INSTRUCTIONS

ANSWER QUESTIONS ONE AND ANY OTHER TWO.

QUESTION ONE [20 MARKS]

- a. Explain the importance of information security governance to an organization. [5 marks]
- b. Explain the three concepts of information security [3 marks]
- c. All organizations strive to ensure that they keep the risks to the organization at bay. Why should an organization have a risk management plan? [4 marks]
- d. Top management play a very vital role in information security management system. Explain [8 marks]

QUESTION TWO [20 MARKS]

- a. Explain how the goals of shareability for an information asset can be achieved in terms of the security requirements of confidentiality, integrity and availability. [10 marks]
- b. A single security measure in isolation will not likely defend an organization from threats and vulnerabilities. It is therefore advisable that an organization enact multiple defensive measures that meet its needs and goals. Describe the elements of information security and explain how they guard the organization from attacks [10 marks]

QUESTION THREE [20 MARKS]

- a. Information security policies reflect the risk appetite of an organization's management and should reflect the managerial mindset when it comes to security. Discuss [10 marks]
- b. The fundamental reasons why organizations implement a risk management process for their information systems are to minimize negative impact on organization resources and to improve the decision-making process. Effective risk management must therefore be totally integrated into the systems development life cycle. Discuss the information system risk management process [10 marks]

QUESTION FOUR [20 MARKS]

- a. Distinguish between a security event and a security incident [2 marks]
- b. Explain the benefits of computer security Incidence Response Team in country. [8 marks]
- c. Discuss the SIX key phases of an incident response plan [12 marks]

QUESTION FIVE [20 MARKS]

- a. Information Security Governance is a framework established to ensure that all the security elements put in place to protect data environment work efficiently, accomplish what is intended, and do so cost effectively. Based on this definition explain how Information Security Governance can be used to solve some of the problems caused by malicious Attacks **[10 marks]**
- b. Information systems are a great resource to the organization. However, if not managed properly, they are vulnerable to risks. Discuss the threats employees pose to information system security. **[10 marks]**