

Question 3

- a. Study the scenario below, then answer the questions that follow:

Two different offices on campus are working to straighten out an error in an employee's bank account due to a direct deposit mistake. Office number 1 emails the correct account and deposit information to office number 2, which promptly fixes the problem. The employee confirms with the bank that everything has, indeed, been straightened out.

- i. What is wrong here and why? [4]
- ii. What should office number 1 have done and why? [4]
- b. With the aid of a simple diagram explain Asymmetric encryption [5]
- c. What are advantages of using symmetric encryption? [4]
- d. What are the disadvantages of using the asymmetric encryption [3]

Question 4

- a. What are information security controls? [2]
- b. Explain three types of Information security controls? [10]
- c. Explain the following terms
 - i. Phishing [2]
 - ii. Malware [2]
 - iii. Denial of Service attack [2]
 - iv. Ransomware [2]

BINDURA UNIVERSITY OF SCIENCE EDUCATION

FACULTY OF SCIENCE EDUCATION

EDUCATIONAL TECHNOLOGY DEPARTMENT

BACHELOR OF SCIENCE EDUCATION IN COMPUTER SCIENCE

CS 412/EDT412 Computer Security

Time 3 hours

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Instruction to candidates

Answer all questions, each question carries 20 marks

Question 1

- a. What are insider threats in an organization? [2]
- b. How can organizations minimize risks associated with inside threats? [8]
- c. Describe the goals an ideal password authentication scheme should achieve. [10]

Question 2

- a. Describe the model that you studied which is designed for guiding the policies of Information security within a company, firm or organization. [12]
- b. Give typical requirements of a secure distributed system. [4]
- c. List any 4 types of computer attacks. [4]

Question 5

- a. What is the difference between identification and authentication? [4]
- b. Explain the following types of identification: [8]
- c. Describe the two types of DDOs below:
 - i. Direct DDos [2]
 - ii. Reflector DDos [2]
- d. State two advantages of reflector DDos over direct DDos. [4]

END OF EXAMINATION