



**UNIVERSITI TUN HUSSEIN ONN MALAYSIA**

**FINAL EXAMINATION  
SEMESTER II  
SESSION 2010/2011**

COURSE NAME : COMPUTER SECURITY  
COURSE CODE : BIT 3133  
PROGRAMME : BACHELOR OF INFORMATION  
TECHNOLOGY  
EXAMINATION DATE : APRIL/MAY 2011  
DURATION : 2 ½ HOURS  
INSTRUCTION : ANSWER ALL QUESTIONS.

THIS QUESTION PAPER CONSISTS OF TWO (2) PAGES

- Q1** (a) Computer security consists of maintaining **THREE (3)** main fundamental objectives. Describe each of these objectives. (6 marks)
- (b) Explain **FOUR (4)** threats that exploit vulnerabilities to the assets of a computing system. (14 marks)
- Q2** (a) Encrypt a message, CAN WE MEET TONIGHT AT TEN using keyword, MESSAGE. Demonstrate your work with appropriate illustrations. (5 marks)
- (b) A ciphertext message, geiwev gmtliwv evi iewc xs fvieo was encrypted using Caesar Cipher method. Decrypt the ciphertext to reveal its plaintext message. Demonstrate your work with appropriate illustrations. (5 marks)
- (c) Based on **Q2(b)**, discuss the weaknesses of Caesar Cipher from cryptanalysis point of view. (10 marks)
- Q3** (a) Explain **TWO (2)** differences between virus and worms. (8 marks)
- (b) Analyze **FOUR (4)** phases in a virus life cycle. (12 marks)
- Q4** Alice works as a programmer for a large software company. She writes and tests utility programs such as compilers. Her company operates two computing shifts: during the day, program development and online application are run while at night, batch production jobs are completed. Alice has access to workload data (company computer resources workload) and learns that adding programming work during the night shift would not adversely affect performance of computers to other users.
- Alice comes back after normal hours to develop program to manage her own business. She uses very minimal resources of the computer and very few expendable supplies such as printer papers.
- Based on the case study above, explain if Alice's behavior is ethical or unethical? Justify your answer by giving value issues and analysis. (20 marks)