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UNIVERSITI TUN HUSSEIN ONN MALAYSIA

**FINAL EXAMINATION
SEMESTER II
SESSION 2021/2022**

COURSE NAME : FUNDAMENTALS OF WEB TECHNOLOGY
COURSE CODE : BIW 10103
PROGRAMME CODE : BIW
EXAMINATION DATE : JULY 2022
DURATION : 3 HOURS
INSTRUCTION :
1. ANSWER ALL QUESTIONS
2. THIS FINAL EXAMINATION IS CONDUCTED VIA **CLOSED BOOK**.
3. STUDENTS ARE **PROHIBITED** TO CONSULT THEIR OWN MATERIAL OR ANY EXTERNAL RESOURCES DURING THE EXAMINATION CONDUCTED VIA CLOSED BOOK.

THIS QUESTION PAPER CONSISTS OF **THREE (3)** PAGES

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TERBUKA

Q1 (a) What is Dynamic Domain Name System (DDNS)? (3 marks)

(b) Give brief explanation on how DDNS works. (3 marks)

(c) Suggest security action to improve Domain Name System (DNS) vulnerabilities. (3 marks)

(d)

Arissa is using online shopping platform to buy groceries. One of her favourite site is . Let say the address of shopee website is 215.238.50.99.

Explain in detail **SIX (6)** steps on how DNS server works while Arissa do the shopping. (6 marks)

Q2 (a) Illustrate and explain about these types of encryption: (i) Symmetric Encryption (4 marks)

(ii) Asymmetric Encryption (4 marks)

(b) Explain differences between Symmetric and Asymmetric Encryption in terms of speed and purpose. (4 marks)

Q3 (a) Discuss and illustrate web services architecture with its language, registry and protocol that support the services. (9 marks)

(b) Discuss **THREE (3)** characteristics of Cloud Computing that used by big organization around the world. (9 marks)



- Q4** (a) List **FIVE (5)** network management processes developed by the International Organization for Standardization (ISO). (5 marks)

- (b) Choose **THREE (3)** network management processes and explain steps that can be taken to ensure the company network can work properly based on the case study below:

Maju Digital Berhad wants to develop a company network infrastructure that can run its information systems internally and globally. The most important systems are Inventory, Employee and Ordering systems. Several users are involved including Staff, Customer and Supplier.

(15 marks)

- (c) Suggest a Business Continuity Planning based on the case study below:

For years, healthcare organizations have been a top target for ransomware attacks. The critical nature of their operations, combined with notoriously lax IT security throughout the industry, are a magnet for ransomware groups looking for big payouts. A prime example was the 2021 ransomware attack on Ireland's healthcare system (HSE).

According to reports, the attack had a widespread impact on operations:

- Dozens of outpatient services were shut down
- Employee payment systems were knocked offline, delaying pay for 146,000 staff
- Covid-19 test results were delayed and a Covid-19 vaccine portal went offline

- (i) List all the possible Business Continuity Planning Process. (5 marks)

- (ii) Explain the processes in Q4(c)(i). (10 marks)

- END OF QUESTION -