



UTHM
Universiti Tun Hussein Onn Malaysia

UNIVERSITI TUN HUSSEIN ONN MALAYSIA

**FINAL EXAMINATION
SEMESTER II
SESSION 2023/2024**

- COURSE NAME : FUNDAMENTALS OF WEB TECHNOLOGY
- COURSE CODE : BIW 10103
- PROGRAMME CODE : BIW
- EXAMINATION DATE : JULY 2024
- DURATION : 3 HOURS
- INSTRUCTIONS :
1. ANSWER ALL QUESTIONS
 2. THIS TEST IS CONDUCTED VIA
 - Open book
 - 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 **FOUR (4)** PAGES

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Q1 Answer the following questions.

- (a) Create a simple Hypertext Markup Language (HTML) webpage that includes a heading, a paragraph of text, an image, and a hyperlink.

(9 marks)

- (b) In addition to **Q1(a)**, style the webpage with a Cascading Style Sheets (CSS) file to give the heading a different font, the paragraph a specific color, and align the image to the center of the page.

(9 marks)

Q2 Answer the following questions.

- (a) What is a Domain Name System (DNS) and what is its primary function in computer networking?

(4 marks)

- (b) Explain how the Dynamic Domain Name System (DDNS) works to get the needed information in the case study.

You are planning a road trip to visit a friend in another city. To get there, you need directions. Similarly, when you type a website's domain name (example `www.visitacity.com`) into your web browser, your device needs directions to find that website's location on the internet.

(10 marks)

Q3 Answer the following questions.

- (a) Based on the condition below, identify the type of web attack that can cause a security breach.

- (i) The malware that can self-replicate and spread independently across networks, often without requiring any user interaction. It exploits vulnerabilities in network protocols or software to infect hundreds of thousands of systems or web servers within a short period. It caused widespread disruption to internet services, damaged numerous websites, and acquired substantial economic costs associated with cleanup and mitigation efforts.

(2 marks)

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(ii) An attacker sets up a fake website or compromises a legitimate one. This website may offer free downloads of popular software, media files, or other enticing content. Users click on the download link and proceed to install believing it to be the legitimate application they intended to download. Once installed, it performs various malicious activities without the user's knowledge, such as spying and backdoor.

(2 marks)

(iii) An attacker sends out a phishing email posing as a legitimate entity, such as a well-known company or a trusted service provider. The email contains a link enticing recipients to download a file, claiming it's an important document, software update, or some other seemingly legitimate content. If the user opens or executes the downloaded file, it can damage hardware, software, or files.

(2 marks)

(b) List **FOUR (4)** methods to secure web applications.

(4 marks)

Q4 Answer the following questions:

(a) Name **TWO (2)** types of processing environment that refer to the infrastructure, setup, or ecosystem in which data or tasks are processed within a computing system.

(3 marks)

(b) Explain how the processing environments in **Q4(a)** differ from one another.

(5 marks)

(c) Discuss **THREE (3)** benefits that Cloud Computing can offer to help in operating any organization around the world.

(9 marks)

Q5 Answer the following questions:

(a) List **FIVE (5)** network management processes that involve activities done by network administrators and IT professionals to monitor, configure, troubleshoot, and optimize network infrastructure.

(5 marks)

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- (b) Answer the following questions based on the case study.

Company BellaVista, a medium-sized enterprise, is experiencing frequent network outages and performance issues. As the network administrator, you have been tasked with improving the network management processes to address these issues and ensure smooth operations.

- (i) Explain **FOUR (4)** network management processes that Company BellaVista should focus on to resolve the current issues.

(8 marks)

- (ii) Propose specific strategies for implementing each identified process effectively.

(8 marks)

- END OF QUESTIONS -

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