UTHM
Universiti Tun Hussein Onn Malaysia

UNIVERSITI TUN HUSSEIN ONN MALAYSIA

FINAL EXAMINATION
SEMESTER II
SESSION 2022/2023

COURSE NAME	:	FUNDAMENTALS OF WEB TECHNOLOGY
COURSE CODE	:	BIW 10103
PROGRAMME CODE	:	BIW
EXAMINATION DATE	:	JULY/AUGUST 2023
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 **FOUR (4)** PAGES

TERBUKA

Q1   Based on **Figure Q1**, write full HTML codes to generate a webpage in the given format.

> # Faculty of Computer Science and Information Technology
>
> *Welcome to FSKTM*
>
> **Departments**
>
> - Department of Information Security and Web Technology
> - Department of Software Engineering
> - Department of Multimedia
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> More info on UTHM

Figure Q1

Format:
- Page is linked to `https://www.uthm.edu.my/en/`. Open the link in a new browser window or new browser tab.
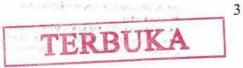- Email is linked to sending email to `azizulr@uthm.edu.my`

(15 marks)

Q2 (a) What is Dynamic Domain Name System (DDNS)?

(3 marks)

(b) Give brief explanation on how DDNS works.

(3 marks)

Q3 (a) Explain in detail what is Secure Socket Layer (SSL)?

(4 marks)

(b) Name **FOUR (4)** usage of SSL.

(8 marks)

(c) Based on the following case study, answer **Q3(c)(i) – (iii).**

ABC Company is a financial services firm that handles sensitive customer information, such as banking and credit card details. Recently, the company has been considering implementing SSL (Secure Sockets Layer) to secure their website and protect customer data.

(i) As an IT consultant, what factors would you consider in recommending SSL to ABC Company?

(2 marks)

(ii) How would you explain the benefits of SSL to the company's management team?

(4 marks)

(iii) What steps would you suggest they take to implement SSL effectively?

(4 marks)

Q4 (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)

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Q5 (a) List **FOUR (4)** types of Network Address Translation (NAT) that used to allow devices on a private network with non-routable IP addresses to access the internet.

(4 marks)

(b) Based on the following case study, develop a Business Continuity Plan (BCP) that fit the needs of the case study and ensure critical operations are maintained at all times.

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.

(15 marks)

- END OF QUESTION -