

TUNKU ABDUL RAHMAN UNIVERSITY OF MANAGEMENT AND TECHNOLOGY

FACULTY OF COMPUTING AND INFORMATION TECHNOLOGY

ACADEMIC YEAR 2023/2024

OCTOBER EXAMINATION

AMIT2043 WEB SYSTEMS AND TECHNOLOGIES

TUESDAY, 24 OCTOBER 2023

TIME: 2.00 PM – 4.00 PM (2 HOURS)

DIPLOMA IN INFORMATION TECHNOLOGY

DIPLOMA IN INFORMATION SYSTEMS

Instructions to Candidates:

Answer **ALL** questions. All questions carry equal marks.

AMIT2043 WEB SYSTEMS AND TECHNOLOGIESQuestion 1

- a) Clearly describe the process of interaction between a *web client* and a *web server* to retrieve and display web pages. Your answer should include the following information:

- *URL*
- *http/https*
- *port numbers*
- *DNS*
- *http request message*
- *TCP/IP*
- *server-side scripts*
- *http response message*
- *status code (e.g. 200 and 404)*

(17 marks)

- b) “Dynamic web pages are more preferable than static web pages”.

Provide **FOUR (4)** key points to justify the statement above.

(8 marks)

[Total: 25 marks]

Question 2

- a) Is PHP using tight data types? Justify your answer. (3 marks)
- b) Explain the main purpose of using *heredoc* and *nowdoc* in PHP and show the main difference between these two delimiters. (4 marks)
- c) Given the following book titles:

Harry Potter, Lord of the Rings, Hunger Games, Twilight Saga

Write PHP codes to:

- (i) declare an index array to store the book titles. (2 marks)
- (ii) display each book title in a new line. (*Hint: for or foreach*) (2 marks)

Given the following author for each book titles respectively:

J.K. Rowling, J.R.R. Tolkien, S. Collins, S. Meyer

- (iii) declare a multidimensional associative array by using the keys ‘*title*’ and ‘*author*’. (*Hint: “title” => Harry Potter*) (2 marks)
- (iv) display each book title with corresponding author in a new line. The sample output is as follows: (*Hint: foreach...foreach*) (5 marks)

Harry Potter => J.K. Rowling

AMIT2043 WEB SYSTEMS AND TECHNOLOGIES**Question 2 (Continued)**

- d) Create a *sticky* form in *search.php* to allow users to submit a product code using *POST* method.

Product Code:

The codes should include a text field, a *Search* button and one hidden field.

(Hint: `<form> $_POST </form>`)

(7 marks)

[Total: 25 marks]

Question 3

- a) (i) Create a html hyperlink (URL) that is linked to *search.php* and the URL carries the two following query strings: (Hint: `<a href> `) (3 marks)

prodID = N101
prodName = Nike

- (ii) Write PHP codes to receive and display the above two strings.

(Hint: `<?php echo ?>`)

(2 marks)

- b) Given the following table (see Table 1) named *Product* stored in MySQL.

Table 1: Product

<i>Prod_ID</i>	<i>Prod_Name</i>
N101	Nike
N102	Adidas
N103	Converse
N104	Puma

- (i) Write PHP codes to connect the MySQL database with the following information and disconnect it if it encounters error. (2 marks)

Username = Oscar
Password = man
Database = testDB
Host = localhost

- (ii) Write SQL codes to select the *Product* table with a product ID (*\$prodID*) submitted by a user. Assigned it to a PHP variable *\$sql_searchRecord*. (3 marks)

- (iii) Write PHP codes to query the MySQL database with the connection (part (i)) and the SQL (part (ii)). (2 marks)

- (iv) Write PHP codes to search the database, and then display the product name (*Prod_Name*) if the record is found. Otherwise, show the message "Record not found". (5 marks)

- c) Compare the function of *include* and *require* in calling the external files. (4 marks)

- d) Discuss **TWO (2)** main differences between *cookie* and *session*. (4 marks)

[Total: 25 marks]

AMIT2043 WEB SYSTEMS AND TECHNOLOGIES**Question 4**

- a) Write PHP codes to set cookie for the following items:

Name => Tom
Member ID => T123

The cookie will be expired after 1 hour. Verify the cookie by display the cookie's name and value. Otherwise, show an error message e.g. *Cookie is not set or expired!*

(Hint: *setcookie* *isset \$_COOKIE*)

(7 marks)

- b) Provide an explanation of *jQuery* and demonstrate its practical application in web development. (4 marks)
- c) Write a *jQuery* to hide the paragraph when it is clicked. (Hint: *p .click() .hide()*) (4 marks)
- d) Describe the operation of Ajax technology. (4 marks)
- e) Given the html tags as follows:

<button id="ajaxButton"> Click Me </button>
<div id="myDiv"></div>

Write a *jQuery* Ajax using *load* to read a text file *ajax_text.txt*. Then, display the content within the division *myDiv* when *Click Me* button is clicked.

(Hint: *.ready() .click() .load(...function())*)

(6 marks)

[Total: 25 marks]