

COMMONWEALTH OF AUSTRALIA

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Family Name	
Given Names	
Student Number	
Teaching Period	Semester 1, 2016

FINAL EXAMINATION	DURATION				
HIT326 – Database-Driven Web Applications	<table border="1"> <tr> <td>Reading Time:</td> <td>10 minutes</td> </tr> <tr> <td>Writing Time:</td> <td>120 minutes</td> </tr> </table>	Reading Time:	10 minutes	Writing Time:	120 minutes
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Writing Time:	120 minutes				

INSTRUCTIONS TO CANDIDATES

1. INSTRUCTIONS TO CANDIDATES:

- 1.1 This exam contains short-answer questions only.
- 1.2 Questions should be answered directly into the Examination Booklet. Please ensure that your Name and Student Number are written clearly in the space provided at the top of each page. An additional booklet is supplied if further writing space is required.
- 1.3 You should attempt any **FIVE** of the ten questions. Answer only five questions. You will not receive additional marks for additional answers. The five lowest marks will determine the result if more than five questions are answered.
- 1.4 Note that all questions are of equal value.
- 1.5 Read questions carefully.

The total marks for this exam is 10

EXAM CONDITIONS

You may begin writing from the commencement of the examination session. The reading time indicated above is provided as a guide only.

This is a RESTRICTED OPEN BOOK examination

No calculators are permitted

One A4 sheet of handwritten double-sided notes permitted

Hard copy, unannotated English translation dictionary only

ADDITIONAL AUTHORISED MATERIALS	EXAMINATION MATERIALS TO BE SUPPLIED
No additional printed material is permitted	2 x 20 Page Book

**THIS EXAMINATION IS PRINTED
DOUBLE-SIDED.**

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BLANK.**

Short Answer Questions

Total No of Marks for this section: 10

This Exam should be answered in the Answer Booklet provided.

You should attempt any **FIVE** of the **TEN** questions. You should answer **ONLY** Five of the questions below. You will not receive additional marks for additional answers. The five lowest marks will determine the result if more than five questions are answered.

Marks for each question are indicated.

Suggested time allocation for the Exam: 120 mins.

Question 1

Briefly discuss the “**Model-View-Controller**” (MVC) design pattern, and how it can be used to organize application code.

(Marks: 2)

Question 2

- a) Relative to MySQL, discuss some of the issues with databases that need to remain online 24x7?

- b) In what way is MySQL more suitable to SQLite for a 24x7 MVC web site?

(Marks: 2)

Question 3

What is the PHP function you would use to end a session and destroy all registered variable.

(Marks: 2)

Question 4

Answer both parts of this question.

Part A

- I. Write three separate lines of PHP code to complete the following tasks in sequence:
Declare the variable myname and assign the number 7 to it.
- II. Declare a second variable called noname and assign the contents of the variable myname to it.
- III. Assign the text 'seven' to the variable myname.

(Mark: 1)

Part B

Consider the following PHP **code**.

```
$messages = array();

$messages['name'] = "Ali";
$messages['error'] = "Database problem";
$messages['flash'] = "You are logged in now";

foreach($messages As $key => $value){
    /* ADD CODE HERE */
}

echo "<p>{$name}</p>";
echo "<p>{$flash}</p>";
```

Write one line of code that code be placed in the above code in the area marked `/*ADD CODE HERE*/` so that the echo code fragment prints

```
<p>Ali</p><p>You are logged in now</p>
```

(Mark: 1)

Question 5

Briefly describe the CRUD database operations? Draw a table that shows the maps of the CRUD operations, HTTP requests, SQL commands and PHP array (server) values.

(Marks: 2)

Question 6

Discuss the **HTTPS** protocol and when it should be implemented in web applications.

(Marks: 2)

Question 7

Discuss the **“Prepare”** statements and their advantages. Give some example code of an insert function that uses the prepare statement.

(Marks: 2)

Question 8

Cookies are inappropriate for storing large amounts of data, what is a solution to this limitation?

(Marks: 2)

Question 9

Draw a diagram that describes the Ajax Web application model. Briefly describe the advantage of Ajax application model compared with the traditional HTTP model.

(Marks: 2)

Question 10

Are regular expressions case sensitive?

(Marks: 2)

End of Exam Paper