

**PAN AFRICA CHRISTIAN UNIVERSITY
EXAMINATIONS PAPER**



PAN AFRICA CHRISTIAN UNIVERSITY

BACHELOR OF BUSINESS INFORMATION TECHNOLOGY

END OF SEMESTER EXAMINATION

DEPARTMENT: COMPUTING AND INFORMATION TECHNOLOGY

COURSE CODE: BIT 108

COURSE TITLE: INTERNET APPLICATION DEVELOPMENT

EXAM DATE: AUGUST, 2021

INSTRUCTIONS

- This exam script has **TWO (2)** sections.
- Read all questions carefully before attempting.
- Answer All questions in Section **A** and any other Three questions in Section **B**.
- Write only your **student number** on the answer booklet provided.
- None programmable calculator permitted
- Calculators on phones, tablets and computers are NOT permitted in Theory Papers

SECTION A

(Answer ALL questions in this section)

QUESTION ONE

- a) Explain how you will fix a bug if you encounter (which is rare) in one of the open source tools. **[2 Marks]**
- b) Outline the tag used to invoke PHP to start interpreting program code, and what is the short form of the tag. **[2 Marks]**
- c) Describe **ONE** feature for MySQL that enable you to examine how a query will work in detail. **[2 Marks]**
- d) Write a snippet code using JSON to store information related to movies based on their name, id, year, actor and edition. **[4 Marks]**

SECTION B (Answer Any Three (3) Questions)

QUESTION TWO

- a) Write the **JavaScript code** to add behavior to the following page that has a user interface for "blending" a name. The UI allows the user to type his/her name into a text box. The user can click a button to "blend" the name, which causes each character of the name to be individually injected into a div with the id of output. Your code should enable the user to choose a font to use for displaying the characters of the name, which is either Arial, Comic Sans MS, or Times New Roman. The letters of the name will be displayed in the font chosen. **[6 Marks]**
- b) Write the PHP code for a partial web page that searches for names that contain a given letter a given number of times, case-insensitively **[3 Marks]**

QUESTION THREE

- a) Write the PHP code necessary to recreate the following appearance **[6 Marks]**

Absolute classes registration

* required field.

Name: *

E-mail: *

Time:

Classes:

Gender: ☐ Female ☐ Male *

Your given values are as :

b) Write a JavaScript function to hide email addresses to protect from unauthorized user. **[2 Marks]**

c) Explain why is it better to use a program editor instead of a plain-text editor. **[2 Marks]**

QUESTION FOUR

a) Explain why a framework such as jQuery Mobile so important for developing modern websites and web apps **[2 Marks]**

b) Consider the following security attack where an evil server attempts to impersonate a good server: The evil server obtains the certificate for the good server (available publically from certificate authorities). The evil server uses an active network attack to arrange for traffic from a particular browser intended for the good server to be sent to the evil server instead. When a client attempts to open an HTTPS connection to the good server, the evil server receives the connection open request and behaves just like

the good server, returning the good server's certificate at the appropriate point in the protocol. Assuming that the evil server can obtain a valid certificate and mount an active network attack.

- i) can the client's security be compromised? Explain your answer
[2 Marks]
- ii) Using suitable examples, discuss **THREE** measures for countering vulnerabilities in website
[6 Marks]

QUESTION FIVE

- a) Tehilah, former PAC university student previously used the Community version of the MySQL open source relational database management system to support and run their core system-several applications powering online customer activity like flight bookings and metadata searches for inexpensive travel. The 5 databases underlying those applications store everything from flight reservations to the actual tickets sent on to customers. They are the most critical part of Tehilah's IT infrastructure-any database downtime means the company can't conduct business. Using Tehilah case, attempt the following.
 - i) Illustrate how do you connect to a MySQL database using MySQL **[2 Marks]**
 - ii) Highlight how to submit a query to MySQL using MySQL **[2 Marks]**
 - iii) Explain how can you retrieve a string containing an error message when a MySQL error occurs. **[2 Marks]**
- b) Explain a couple of ways to convey the data to the rest of the program if you generate data within a function **[4 Marks]**

QUESTION SIX

- a) Explain where the username and password are stored in a PHP program when you are using HTTP authentication **[5 marks]**
- b) If a form has to offer three choices to a user, each of which is mutually exclusive so that only one of the three can be selected. Describe using examples on which input

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type would you use, given a choice between checkboxes and radio buttons.
[5 Marks]