

QUESTION ONE [30 Marks]

- a. State four open standards used by web services during communications. [4 Marks]
- b. Create a PHP class named Fruit consisting of two properties (\$name and \$color) and two methods set_name () and get_name () for setting and getting the \$name property. [6 Marks]
- c. Outline any four REST design principles suitable for a web application. [8 Marks]
- d. Describe the three access modifiers used in PHP [6 Marks]
- e. Write the PHP code for connecting to a MySQL database. [6 marks]

QUESTION 2[20 Marks]

- a. Describe any Four PHP programming applications of PHP. [6 Marks]
- b. Write a PHP program that Output "Have a good morning!" if the current time is less than 10, and "Have a good day!" if the current time is less than 20. Otherwise it will output "Have a good night!"
- c. Assuming a successful connection, write PHP code that can INSERT data into a database table as shown below (table name = t1). [8 Marks]

firstname	lastname	email
John	Mwangi	jm@gmail.com

QUESTION 3[20 Marks]

- a. Explain the importance of Routing in multi-tier web architecture. [2 Marks]
- b. Identify Five Laravel sub-directories that enable it to implement 3-tier web architecture [10 Marks]
- c. Assuming a successful connection, write PHP code that can DELETE the second record in the table (table name = t1). [8 Marks]

id	firstname	lastname	email
1	John	Mwangi	jm@gmail.com
2	Peter	Otieno	po@yahoo.com
3	Alice	Nanjala	an@gmail.com

QUESTION 3[20 Marks]

- a. Outline four benefits of using a template engine such as blade in web design. [6 Marks]

- b. Describe the four CSS classes for the Bootstrap grid system. [8 Marks]
- d. Assuming a successful connection, write PHP code that can UPDATE the lastname of the second record in the table (table name = t1). [6 Marks]

id	firstname	lastname	email
1	John	Mwangi	jm@gmail.com
2	Peter	Otieno	po@yahoo.com
3	Alice	Nanjala	an@gmail.com

QUESTION 4[20 Marks]

- a. Outline Four advantages of data migrations as used in 3-tierweb applications. [8 Marks]
- b. Differentiate between the POST and the GET PHP variables . [4 marks]
- c. Assuming a successful connection, write PHP code that can DISPLAY all the records from the table (table name = t1). [8 Marks]

id	firstname	lastname	email
1	John	Mwangi	jm@gmail.com
2	Peter	Otieno	po@yahoo.com
3	Alice	Nanjala	an@gmail.com

QUESTION 5 [20 Marks]

The figure below illustrates an extract of a web form from a school web application that requires PHP validation.

* required field

Name: *

E-mail: *

- a. Write the PHP validation scripts for Name and Email [10 marks]
- b. Write a PHP function to sanitize the data [4 Marks]
- c. Write the code for the Form complete with validations. [6 marks]

