

**061306T4CPM**

**COMPUTER PROGRAMMING LEVEL 6**

**IT/OS/CP/CR/09/6/A**

**DEVELOP SERVER-SIDE WEB APPLICATIONS USING PHP**

**NOV/DEC 2023**



**TVET CURRICULUM DEVELOPMENT, ASSESSMENT AND CERTIFICATION  
COUNCIL (TVET CDACC)**

**WRITTEN ASSESSMENT**

**TIME: 3 Hours**

**INSTRUCTIONS TO CANDIDATE:**

1. *The paper consists of **two** sections: **A** and **B***
2. *Answer **ALL** questions in Section **A** and any **Three** from section **B***
3. *Marks for each question are indicated in the brackets*
4. *A separate answer booklet will be provided*
5. *Do not write on the question paper*

***Candidates should answer the questions in English***

***This paper consists of Four (4) printed pages.***

***Candidate should check the question paper to ascertain that all the pages are  
printed as indicated and that no questions are missing.***

**SECTION A (40 Marks)**

*(Answer ALL the questions in this section)*

1. Explain the meaning of server-side application development and give TWO examples of programming languages used. (4 Marks)
2. Outline the function of the following super-global functions as used in PHP programming language.
  - i. \$\_SERVER (2 Marks)
  - ii. \$\_SESSION (2 Marks)
3. Explain any TWO types of errors that a PHP programmer is likely to encounter during form creation. (4 Marks)
4. Mmena is an experienced web designer who prefers to use PHP for server-side scripting over other languages. List FOUR reasons for his preference. (4 Marks)
5. Outline TWO PHP functions that can be used to escape html code on form. (4 Marks)
6. Peter wants to submit a form data to the database but he is not sure which method to use between POST and GET. Contrast the two methods and advise him accordingly. (4 Marks)
7. Write a PHP script that can be used to generate all even numbers between 0-100. Use *for loop*. (6 Marks)
8. Outline FOUR rules of naming variables in PHP programming language. (4 Marks)
9. With the aid of a syntax, explain a ternary operator in PHP language. (4 Marks)
10. Outline TWO types of arrays as used in a sever side programming language. (2 Marks)

**SECTION B (60 Marks)***(Answer any THREE questions in this section)*

11.

- a) Validation is an important process used for data management across a server side programming language. Use this concept to answer the following questions.
- Outline FOUR advantages of ensuring that user data is validated (4 Marks)
  - Explain any THREE methods used to validate information from a text box (6 Marks)
- b) Arrays play a vital role in PHP programming. Use the knowledge you have on arrays to answer the following questions.
- Explain TWO advantages of using arrays in PHP programming. (2 Marks)
  - Assuming table 1 below is a representation of a database table, write a PHP code snippet that will display the data as it appears. (8 Marks)

Name	Gender	Age
John Kamau	Male	20
Mike Mmena	Male	30
Ann Kamau	Female	21
Damian Kalondu	Female	24

**Table 1**

12.

- a) Sessions and cookies are very important when it comes to website data security and management. They can be used to enhance security or as a loophole to security threats.
- Explain TWO Differences between session and cookie (4 Marks)
  - Using an example in each case, write a snippet that shows how a session is created and destroyed (6 Marks)
- b) Control structures help a program to control the execution of a program. Use the knowledge on Control structures to answer the following questions.
- Contrast *while* and *do while* loops as used in PHP (2 Marks)
  - Use the *if...else* control structure to compute net salary of an employee whose tax is calculated using the table 2 below. (8 Marks)

*Hint: net salary = salary - tax*

Salary	Tax rate
<30000	25%
30001 to 50000	30%
ABOVE 50000	35%

**Table 2**

13.

- a) In PHP programming language, the use of constants is considered to be one of the best practices.
- i. Explain TWO reasons as to why this is true. (4 Marks)
  - ii. Write a PHP script that declares *PI* as a constant whose value is 3.142. The script should be used to calculate the area of a circle whose radius is 7.4. (6 Marks)
- b) i. With an aid of an example, explain the *for each* loop in PHP. (4 Marks)
- ii. Explain any THREE types of data used in PHP programming language. (6 Marks)

14.

- a) i. Differentiate between *break* and *continue* statements as used in PHP. (4 Marks)
- ii. Explain THREE types of scopes used in PHP programming language. (6 Marks)
- b) i. Differentiate between *require* and *require once* () functions as used in PHP. (4 Marks)
- ii. Explain the difference between runtime exception and compile time exception. (6 Marks)

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