# THE CATHOLIC UNIVERSITY OF EASTERN AFRICA

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**MAIN EXAMINATION**

**MAY – AUGUST 2021**

**FACULTY OF SCIENCE**

**DEPARTMENT OF COMPUTER AND INFORMATION SCIENCE**

**REGULAR PROGRAMME**

**DIT 014: WEB DESIGN & DEVELOPMENT**

| Date: AUGUST 2021 | Duration: 2 Hours |
|---|---|
| INSTRUCTIONS: 1. SECTION A [Answer 1- Compulsory] | |
| 2. SECTION B [Answer 2 Questions] | |

**QUESTION A**

i) Select appropriate answer from the multiple choice provided

1. _____ is the current standard language used to create Web pages.    **(1 Mark)**

    a. HTML

    b. DHTML

    c. XHTML

    d. XML

2. You can use the _____ panel to create folders to organize and store the various files for your Web site, and to add pages to your Web site.    **(1 Mark)**

    a. Files

    b. Application

    c. CSS

    d. Dreamweaver

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3. The _____ is the large white area in the Dreamweaver program window where you create and edit Web pages. **(1 Mark)**

    a. menu bar

    b. document window

    c. Insert bar

    d. Document toolbar

4. The _____ includes eight groups of buttons displayed in a drop-down menu. **(1 Mark)**

    a. menu bar

    b. document window

    c. Insert bar

    d. Document toolbar

5. The left end of the status bar displays the _____. **(1 Mark)**

    a. Insert bar

    b. tag selector

    c. Property inspector

    d. Multiple Document Interface

6. The _____ tool is used for panning.

    a. Hand

    b. Zoom

    c. Select

    d. Edit

7. _____ view shows the page as it would appear in a browser and is primarily used for designing and creating a Web page. **(1 Mark)**

    a. Code and Design

    b. Code

    c. Debugging

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d. Design

8. _____ view shows the underlying HTML code for the page, but not how it will look on a browser. **(1 Mark)**

    a. Code and Design

    b. Code

    c. Debugging

    d. Design

9. Most information on a Web page is presented in the form of _____. **(1 Mark)**

    a. graphics

    b. links

    c. banners

    d. text

10. _____ are graphics displayed across the top of the screen that can incorporate a company's logo, contact information, and links to the other pages in the site. **(1 Mark)**

    a. Image maps
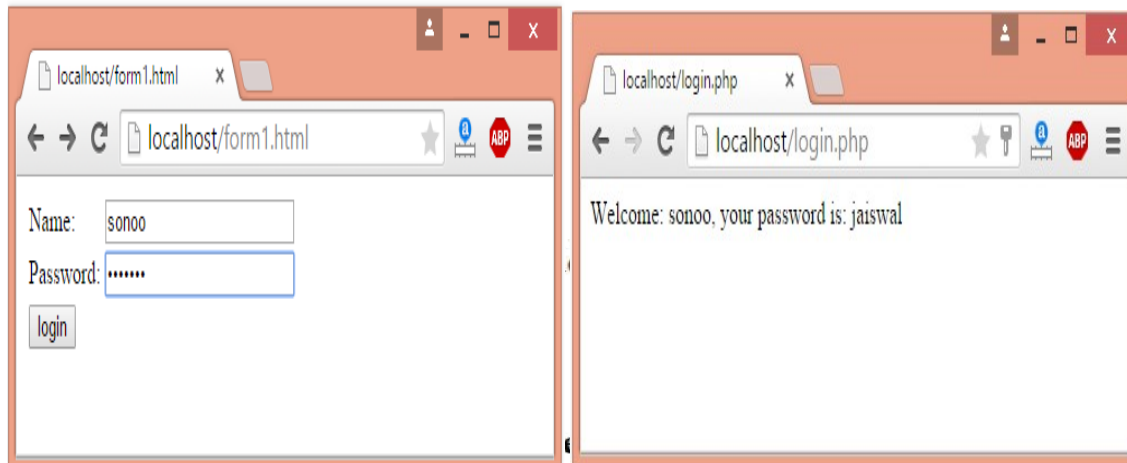
    b. Links

    c. Banners

    d. Navigation bars

ii) What is HTTP? What problem(s) does it solve as compared to pre-HTTP protocols? Describe the contents/parts of an HTTP request and response. Know the differences between the various HTTP methods and when each method should be used. Know the parts of a URL. **(5 Marks)**

iii) Describe the process, in detail, of sending a request from a client computer to a web server and retrieving a response. (**2 Marks**)

iv) What advantages does HTML have over a plain-text representation of data? Discuss

(**3 Marks**)

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v) What advantages does CSS offer over including information directly into the HTML document? List and explain why is this feature important?                    **(4 Marks)**

vi) Write a HTML and PHP code that would display the following output.        **(6 Marks)**



```
1. Coffee
2. Tea
3. Milk
```

## QUESTION TWO

a)  List and explain **THREE** factors in modern browsers make writing JavaScript difficult.
                                                                          **(6 Marks)**

b)  Why is scaling web applications harder than scaling static web content? Describe one common method to distribute requests evenly among a collection of web and application servers. What is the problem with this common method? **(5 Marks)**

c)   Describe **FOUR** Internet Services that allows user to access huge amount of information over web.                                      **(4 marks)**

d) Write a program in HTML code that will give the output shown below   **(5 marks)**

## QUESTION THREE

a) Describe **THREE** major roles enhanced by a proxy server                **(6 Marks)**

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b) James a new employer in a company was asked to design new website and customize it for business clients to order goods. Evaluate **THREE** factors he needs to consider before designing a web application**.** **(6 Marks)**

c) ICT group needs to register a Domain Name for their website. Identify steps **FOUR** they will use to get their desired domain name registered. **(4 Marks)**

d) Will client server side java script guarantee that a server side web application is not protected from bad information (yes/no)? Briefly explain your answer. **(4 Marks)**

## QUESTION FOUR

a) Imagine you have class with HTML element. Write a simple html code with inline CSS that would display general personal details. **(5 Marks)**
b) Imagine you need to set the map properties by creating a function, and using functionalities of Google Maps API provided by a JavaScript library located at Google. Write a script to refer to the Google Maps API with a callback to the myMap function. **(5 Marks)**
c) A web application is a client-server application that uses a web browser as its client program, and performs an interactive service by connecting with servers over the internet. Explain at least **THREE** categories of websites based on their functionality (**6 marks)**
d) Outline any **FOUR** properties in Cascading style sheet. **(4 Marks)**

## QUESTION FIVE

d) Describe **TWO** advantages and disadvantages of using a frameset in web design **(4 Marks)**
e) A class was evaluating dynamic websites and they agreed that dynamic websites show different information at different point of time. Describe **THREE** disadvantage of dynamic website. **(3 Marks)**

f) Differentiate between roles of Action Script and VBScript in web design

**(4 Marks)**

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g) Write the **CSS code** necessary to recreate the following appearance on-screen, exactly as shown. The page uses the HTML code below. You are **not allowed to modify the HTML**.

**(9 Marks)**

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