

2920/304  
INTERNET BASED PROGRAMMING  
July 2018  
Time: 3 hours



THE KENYA NATIONAL EXAMINATIONS COUNCIL  
DIPLOMA IN INFORMATION COMMUNICATION TECHNOLOGY  
MODULE III

INTERNET BASED PROGRAMMING

3 hours

**INSTRUCTION TO CANDIDATES**

*This question paper consists of EIGHT questions.  
Answer any FIVE of the EIGHT questions in the answer booklet provided.  
Candidates should answer the questions in English.*

**This paper consists of 4 printed pages.**

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

1. ✓
- (a) State the function of each of the following HTML tags: (4 marks)
- (i) <head>
  - (ii) <link>
  - (iii) <title>
  - (iv) <tr>
- (b) Distinguish between *hierarchical* and *linear* web structure as used in web design. (4 marks)
- (c) Explain the function of each of the following in a web page: (6 marks)
- (i) home page;
  - (ii) web browser;
  - (iii) web server.
- (d) Write a HTML code that would be used to display on the browser the following list of countries; Kenya, Uganda, Tanzania, Rwanda in a drop down list with the country Rwanda selected. The screen should have a submit button. (6 marks)
2. (a) State the HTML tag that would help a web developer perform each of the following. (4 marks)
- (i) Quote some text from another website;
  - (ii) State the version of HTML code in the document;
  - (iii) Define an abbreviation or acronym;
  - (iv) To markup updates and modifications in a document.
- (b) Distinguish between *href="file.html"* and *href=../file.html* path names as used in HTML. (4 marks)
- (c) Explain each of the following characteristics of a web: (6 marks)
- (i) Cross platform;
  - (ii) Interactive;
  - (iii) Dynamic.
- (d) Write a Java Script program that creates an array to store the values 90,70,80,50. The program should print elements in the array in a reverse order. (6 marks)
3. ✓
- (a) Explain the function of each of the following Uniform Resource Locator. (4 marks)
- (i) Mailto;
  - (ii) Gopher Protocol.
- (b) Anita would like to include images on a web page. Describe **two** types of image files that she is likely to use. (4 marks)
- (c) One of the factors to consider when coming up with a web site is consistent layout.

(i) Explain the term *consistent layout* as applied during the design of a web page. (2 marks)

(ii) Explain **two** ways in which a web developer can maintain a consistent layout during the development. (4 marks)

(d) Write a HTML code that would display the following table on a web browser. The table should have a border width of 5 pixels, spacing between the cells of 5 pixels and spacing between the text and cell border of 4 pixels. (6 marks)

Accommodation		University	Rank
		Maryland	1
Full Board	Day scholars	Unilebby	2
4000 per month	30 per meal	Kennet	3

4. (a) Marion has created a web page with information that acts as the signature for the document. Outline **four** types of information she would consider in the address. (4 marks)

(b) With the aid of an example in each case, distinguish between *character style* and *logical style* as used in HTML. (4 marks)

(c) The following is a statement used in a JavaScript code :

```
<script language="javascript" type="text/javascript">
```

(i) Identify the attributes in the statement; (2 marks)

(ii) Explain the function of the attributes associated with the tag. (4 marks)

(d) Explain **three** disadvantages of using WYSIWYG editor during the design of a web page. (6 marks)

5. (a) Explain the term *Hypertext Mark Up Language*. (2 marks)

(b) (i) Define the term CGI as used in the Internet. (2 marks)

(ii) Outline **four** advantages of using CGI programs. (4 marks)

(c) Explain **three** reasons that may motivate a web designer to use *functions* during development. (6 marks)

(d) Write a JavaScript program embedded in HTML code that would display all the even numbers between 1 and 100. Use a while loop. (6 marks)

6. (a) Outline **four** benefits derived from using a *three tier architecture* in web design. (4 marks)

(b) Distinguish between *hyper text transfer protocol* and *file transfer protocol* as used in the Internet. (4 marks)

(c) Agneta has been mandated to identify a company that would host their new website. Explain **three** factors that she should consider when making the selection. (6 marks)

- (d) Write a HTML code that would display the following listed information when run on a web browser. (6 marks)

- A. Cities in Kenya  
1. Nairobi  
2. Mombasa
- B. Main Transport of Kenyan people
- Matatu
  - Buses
  - Rail
- C. Colors of our national flag
- Black
  - White
  - Red
  - Green

#### FOOD SPECIALITIES OF KENYAN PEOPLE

##### Ugali

A dish made of maize flour, millet flour, or Sorghum flour cooked in boiling water

##### Matooke

A green banana, often steamed in its own leaves and mashed

##### Chapati

A thin pancake of unleavened wholemeal bread cooked on a griddle.

7. (a) Outline **three** factors that should be considered during website maintenance. (3 marks)
- (b) Distinguish between a *web designer* and a *web developer*. (4 marks)
- (c) Maurice has been requested to design a web site for an organization. Outline **six** phases that he should consider during the design. (6 marks)
- (d) Write a JavaScript program embedded in HTML that uses an event handler *on click* to display the word *click me* on the screen. When the word is clicked it displays the string "hellow world" on an alert box. Use a function. (7 marks)
8. (a) Define the term *Internet*. (2 marks)
- (b) A university web site has been experiencing frequent web attacks. Explain **three** such attacks it is likely to experience. (6 marks)
- (c) Explain **three** types of testing that can be performed on a web site. (6 marks)
- (d) Write an ASP code embedded in HTML that assigns a value 12 to a variable T. The program should display on the browser the greetings "Good Morning" if the value of T is less than 12, else display the greetings "Good afternoon" (6 marks)

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