Name: _____ Index No. _____ / _____

2920/304
INTERNET BASED PROGRAMMING
November 2015
Time: 3 hours

Candidate's Signature: _____

Date: _____

THE KENYA NATIONAL EXAMINATIONS COUNCIL

DIPLOMA IN INFORMATION COMMUNICATION TECHNOLOGY

MODULE III

INTERNET BASED PROGRAMMING

3 hours

INSTRUCTIONS TO CANDIDATES:

Write your name and index number in the spaces provided above.
Sign and write the date of examination in the spaces provided above.
Answer any FIVE of the EIGHT questions in this paper in the spaces provided after each question.
Candidates to answer the questions in English.

For Examiner's Use Only.

Question	1	2	3	4	5	6	7	8	Total Score
Candidate's Score									

This paper consists of 18 printed pages.

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

Turn over

(d) A teacher in a college prefers students to develop websites by writing HTML codes from scratch instead of using code generated applications. Outline **four** possible reasons for this. (4 marks)

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2. (a) Explain the term *cache* as used in a web browser. (2 marks)

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(b) (i) Other than the *<script>* tag, outline **three** tags that can be added to the head section of an HTML document. (3 marks)

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(ii) State a circumstance under which each of the following image attributes could be used in HTML:

I. scroll; (2 marks)

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II. repeat. (2 marks)

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(c) With the aid of an example in each case, distinguish between a *link* and a *universal resource locator* as used in the Internet. (5 marks)

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(d) (i) State **two** differences between *dynamic* and *static* web pages as used in the Internet. (4 marks)

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(ii) Outline **two** advantages of using *static* web pages. (2 marks)

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3. (a) (i) Outline the steps followed to view the source code of a page displayed on a web browser. (2 marks)

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(ii) With the aid of an example, explain how a reserved character in HTML could be displayed on a webpage. (3 marks)

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(b) Ann, a web designer, would like to include images on a website she is creating.

(i) List **four** types of image file formats that she is likely to use. (2 marks)

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(ii) Outline **three** factors that she would consider when placing images on the webpage. (3 marks)

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(c) Outline the function of each of the following parts of a web authoring tool interface.

(i) Properties inspector; (1 mark)

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(ii)   Tag selector;   (1 mark)

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(iii)   Document window;   (1 mark)

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(iv)   Site panel.   (1 mark)

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(d)   Peter runs a non-governmental organisation and he is required to use a website to solicit for financial assistance. Explain **three** factors that he should consider when selecting a server to host his website.   (6 marks)

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4.   (a)   Explain the term *home page* as used in the Internet.   (2 marks)

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(b)   Distinguish between *absolute URL* path and *relative URL* path as used in HTML.

(4 marks)

(c)   Write *HTML* segment code that may be used to:

(i)   play music in a file named *mysong2.mp3* located in a site www.worldmusic when the text *mymusic* is clicked;   (2 marks)

(ii)   point to the location where the image named "logo.gif", located in the "images" directory on " *www.knec.ac.ke* "   (2 marks)

(iii) load a page named *music.html* in the directory above the music directory.

(2 marks)

(d)   (i)   Given that the variable *aNum* holds a value 4. Determine the value of y and aNum++ after each of the following statement is executed in a JavaScript program:

I.   var y = aNum++   (1 mark)

II.   var y = ++aNum   (1 mark)

(ii) Write a JavaScript program embedded in HTML that prompts a user to enter two values one at a time. The program should then use a function to determine the product of the two numbers and display the results on a web browser in the format M x N = product. (6 marks)

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5. (a) Outline the function of each of the following HTML tags:

(i) a (1 mark)

(ii) var (1 mark)

(iii) sup (1 mark)

(b) Figure 1 shows command buttons labelled (i), (ii) and (iii) on a web authoring tool. Write the tags that would be generated on the code window when each buttons is clicked. (3 marks)
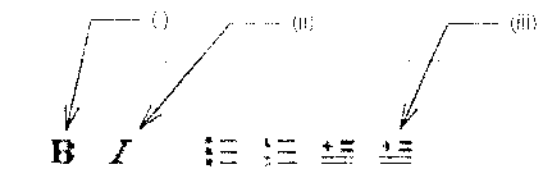

Figure 1

(c) Explain the importance of considering each of the following factors when designing a website:

(i) the target audience; (2 marks)

(ii) font size; (2 marks)

(iii)   domain name;   (2 marks)

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(iv)   navigation.   (2 marks)

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

Gender?   Send   Clear
Male ○ Female ○

What is your age range?
Under 16
16 to 25
26 to 40
40 to 60
Over 60

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6.   (a)   State **four** types of video file formats that may be used to display a video on the web.

(2 marks)

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(b)   (i)   Some web developers believe that the best approach to create HTML code is to use a text editor instead of visual approach. Explain three reasons for this.

(6 marks)

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(ii)   State **four** system requirements necessary when installing a graphical web authoring application in a computer.   (4 marks)

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(c)   Write the HTML code that would generate the following table when run on a web browser.   (8 marks)

MY DAILY MENU		
M O N	Breakfast	Orange juice Baked beans Tea
	Lunch	Rice and meat Mashed potatoes
	Dinner	Hamburger steak Mashed potatoes Ugali and traditional vegetables

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7.   (a)   Describe each of the following threats to data in the Internet.

            (i)   Denial of service;   (2 marks)

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            (ii)   Social engineering;   (2 marks)

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(iii)   SQL injection. (2 ma

(b)   Explain **three** benefits of using templates to design a website. (6 ma

(c)   Write JavaScript program embedded in HTML that would be used to display the message on a web browser based on the system time as shown in Table 1. (8 ma

Time	Message
Before noon	Good morning visitor
From noon to 17 hr	Good afternoon, and thanks for visiting
From 17 hr to 20 hr	Good evening, and thanks for visiting
After 20 hr	Glad to see you this time of the night

Table 1