

KASNEB

DICT LEVEL III

PRINCIPLES OF WEB DEVELOPMENT

TUESDAY: 22 November 2016.

Time Allowed: 3 hours.

Answer ALL questions. Marks allocated to each question are shown at the end of the question.

QUESTION ONE

- (a) (i) Highlight three characteristics of HTML element attributes. (3 marks)
(ii) With the aid of HTML code, show how you would insert an image named "picha.jpg" whose dimensions are 192px by 200px in width and height respectively in a web page. (2 marks)
- (b) Describe the following HTML attributes:
- (i) alt. (1 mark)
(ii) disabled. (1 mark)
(iii) href. (1 mark)
(iv) id. (1 mark)
(v) style. (1 mark)
- (c) Outline three steps one should follow when setting image properties using property inspector in dreamweaver. (3 marks)
- (d) Consider the basic HTML document shown below:
- ```
(1) <!DOCTYPE html>
(2) <html>
(3) <head>
(4) <title>Page Title</title>
 </head>
(5) <body>
(6) <h1>My First Heading</h1>
(7) <p><My first paragraph.</p>
 </body>
</html>
```

#### Required:

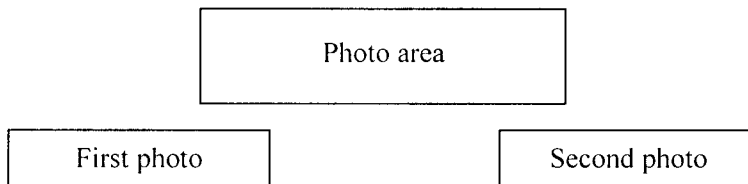
- (i) State the importance of the line labelled (1) above. (1 mark)  
(ii) Explain the purpose of the text enclosed between the opening tag and its respective closing tag in each of the lines labelled (2) to (7). (6 marks)

(Total: 20 marks)

#### QUESTION TWO

- (a) (i) Describe a JavaScript function. (2 marks)  
(ii) The computer interface "Toggle My Pictures" shown below displays a photo named "FirstPhoto.jpg" when the "First Photo" button is clicked. On clicking the "Second Photo" button, a photo named "SecondPhoto.jpg" is instead displayed.

#### Toggle my pictures



#### Required:

Write a JavaScript code that would implement the above interface behaviour.

(10 marks)

(b) Differentiate between each of the following pairs of HTML tags:

- (i) “<strong> </strong>” and “<em> </em>”. (2 marks)
- (ii) “<pre> </pre>” and “<del></del>”. (2 marks)
- (iii) “<br/>” and “<hr/>”. (2 marks)

(c) Write HTML code to generate the following:

**Fruits for Dinner**

- Apple
- Orange
- Grapefruit

(2 marks)

**(Total: 20 marks)**

**QUESTION THREE**

(a) Outline three characteristics of JavaScript that make it suitable for client-side scripting. (3 marks)

(b) You have been requested to write a program to compute the area of a right-angled triangle. The interface for this program is shown in the figure below.

The image shows a web form with a title "Area of a right-angled triangle". Below the title, there are three input fields: "Height", "Base", and "Answer". Below the "Answer" field, there is a button labeled "Add".

**Required:**

(i) Write HTML code that will create the above interface.

Ensure that the HTML code calls a function called “calcsun ( )” that computes the area of the triangle.

(10 marks)

(ii) Write the function calcsun ( ) that retrieves values from the HTML interface in (b) (i) above and calculates the area of a triangle.

Note: Area of triangle =  $\frac{1}{2} \times \text{base} \times \text{height}$

(5 marks)

(c) List two open source web servers.

(2 marks)

**(Total: 20 marks)**

**QUESTION FOUR**

(a) Analyse five considerations that should be taken into account when designing a website. (5 marks)

(b) Describe the following graphic file formats:

- (i) GIF. (3 marks)
- (ii) JPEG. (3 marks)
- (iii) PNG. (3 marks)

(c) Enumerate the steps that one would follow to create a shape tween using flash animation. (6 marks)

**(Total: 20 marks)**

**QUESTION FIVE**

(a) (i) Differentiate between “layers” and “animations” in the context of web design. (4 marks)

(ii) Describe three types of animations. (6 marks)

(b) Write HTML code to render the table below when run on a browser.

NAME	GENDER	AGE
Mandella	Male	80
Halima	Female	32
Katimba	Female	26

← Header

Note: The first row is the header row.

(6 marks)

(c) Suggest four reasons why multimedia web sites are not practical for a majority of Internet users. (4 marks)

(Total: 20 marks)

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