



kasneb

DICT LEVEL III

PRINCIPLES OF WEB DEVELOPMENT

WEDNESDAY: 27 November 2019.

Time Allowed: 3 hours.

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

QUESTION ONE

(a) Using CSS code demonstrate:

- (i) How to change the background colour of an element on hover from red to green. (3 marks)
- (ii) The basic structure of an HTML5 document. (3 marks)

(b) List four animation properties available in CSS3. (4 marks)

(c) Analyse how functional animation helps improve user experience with respect to visual feedback on user actions. (5 marks)

(d) A student is using CSS3 to create an animation named "Makmende". He wants to transform the opacity of a character from 0 at 0% at a scale of 0.1 to an opacity of 1 at 60% at a scale of 1.2 to a final look of a scale of 1 at 100%.

Required:

Created the CSS code that will achieve this animation.

(5 marks)

(Total: 20 marks)

QUESTION TWO

(a) In each case, list three:

- (i) Image-processing software that could produce GIF animations. (3 marks)
- (ii) Client-side supported language used for web programming. (3 marks)

(b) E-commerce has widely been adopted in business.

Required:

Discuss five ways in which e-commerce has transformed businesses.

(10 marks)

(c) The following JavaScript code contains errors:

```
var text = "";  
var numbers = {150, 4, 9, 16, 25}  
numbers * for Each (myFunction);  
function myFunction(value, index, array);  
    txt = txt + value + <br>;  
}
```

Required:

Rewrite the above code without errors.

(4 marks)

(Total: 20 marks)

QUESTION THREE

(a) Distinguish between the following pairs of tags as used in HTML:

- (i) Element selector and class selector. (4 marks)
- (ii) Src and alt. (4 marks)
- (iii) Field set and legend. (4 marks)

- (b) Highlight two reasons why it is important to optimise GIF images before integrating them on a website. (2 marks)
- (c) Write HTML Code that will render the list below: (6 marks)
1. Laptop
 - Hp
 - Dell
 2. Phone
 - Samsung
 - Iphone
 3. Notebook
- (Total: 20 marks)

QUESTION FOUR

- (a) In relation to content, summarise four points that would lead to a satisfying user experience on visiting a website. (8 marks)
- (b) Enumerate the steps that an animator could follow in order to change some text into a symbol then make it turn around while moving from one location to another using Flash application. (4 marks)
- (c) Write HTML5 code that will produce the following output:

MONTHLY BUDGET

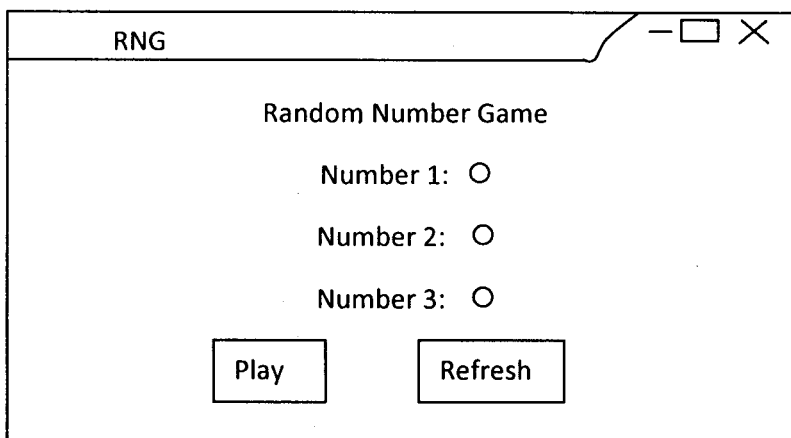
Bills

MONTH	FOOD	OTHERS
August	Ksh.20,000	Ksh.34,000
September	Ksh.25,000	Ksh.26,000

(8 marks)
(Total: 20 marks)

QUESTION FIVE

- (a) Highlight two reasons why it is important to include an alt attribute on an img tag. (2 marks)
- (b) The user interface shown below is intended for the development of a simple game.



Number 1, Number 2 and Number 3 represent radio buttons which are mutually exclusive.

Required:

- (i) HTML code that will render the interface above on a web browser. (5 marks)
 - (ii) JavaScript function to generate a number randomly (1, 2 or 3). This number should be assigned to a global variable. (3 marks)
 - (iii) JavaScript function that will call the function in (b) (ii) above on page load. (3 marks)
 - (iv) JavaScript function that will compare the global variable defined in (b) (ii) above with the selected radio button value. If they match, the user is informed, "You won", otherwise the user is informed, "Try again". (5 marks)
 - (v) HTML code for buttons Play and Refresh that will call the functions in (b) (iii) and (b) (iv) above. (2 marks)
- (Total: 20 marks)**
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