



DICT LEVEL III

PRINCIPLES OF WEB DEVELOPMENT

TUESDAY: 21 May 2019.

Time Allowed: 3 hours.

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

QUESTION ONE

(a) Distinguish between the following pairs of terms in the context of web development:

- (i) An “information architect” and a “content strategist”. (4 marks)
- (ii) “User experience (UX) design” and “user integrated (UI) design”. (4 marks)
- (iii) “Markup language” and “styling”. (4 marks)
- (iv) “Frontend web development” and “backend web development”. (4 marks)

(b) Table A below shows selected software tools for web development while Table B shows tasks associated with the software tools.

(i)	HTML
(ii)	CSS
(iii)	Javascript
(iv)	Ruby

Checks a form field for a valid entry
Creates a custom server-side web application
Identifies text as a second level heading
Makes all second level headings blue

Required:

Combine Table A and Table B into one table by matching a software tool with the appropriate task.

(4 marks)

(Total: 20 marks)

QUESTION TWO

- (a) (i) Citing the functions used, explain the concept of timers in Javascript. (3 marks)
- (ii) Identify the major drawback of using timers. (2 marks)
- (b) (i) In relation to web development, explain the meaning of the term “embedded style sheet”. (1 mark)
- (ii) Use the relevant element to illustrate how you could embed an entire style sheet within an HTML document. (2 marks)
- (c) (i) Differentiate between a “class selector” and an “id selector” as used in cascading styles sheets (CSS). (2 marks)
- (ii) Using a suitable code, illustrate the use of both the class selector and the id selector. (4 marks)

(d) Consider the code below:

```
<script>
  Function validateform ( ) {
    var name = document.myform.name.value
    var password = document.myform.password.value;
    if (name == null || name == "") {
      alert ("Name can't be blank");
      return false;
    } else if (password.length<6) {
      alert ("password should be more than six characters long");
      return false;
    }
  }
</script>
```

Required:

Create the graphical user interfaces that will be rendered by the code above on a browser.

(6 marks)

(Total: 20 marks)

QUESTION THREE

(a) A web developer wants to create a simple movie clip using Flash CS3.

Required:

Enumerate the procedure he would use to perform each of the following:

- (i) Open a new document. (2 marks)
 - (ii) Access the document properties. (2 marks)
 - (iii) Change the speed of the movie to make the animation smoother. (2 marks)
- (b) List four multimedia file extensions used within HTML. (2 marks)
- (c) Describe the functions of three parties involved in the process of domain name registration. (6 marks)
- (d) Appraise the following emerging trends as applied in web design:
- (i) Responsive design. (2 marks)
 - (ii) Chatbots. (2 marks)
 - (iii) Microinteractions. (2 marks)

(Total: 20 marks)

QUESTION FOUR

(a) The table below shows the estimated area in square kilometers of selected towns in different counties:

Coastal Counties

County	Capital	Area (sq Kilometers)
Mombasa	Mombasa	212.5
Kwale	Kwale	8,270.3
Kilifi	Kilifi	12,245.9
Tana River	Holla	35,375.8

Required:

Write a HTML code that will render the above table on a browser.

(10 marks)

(b) "It is imperative for web developers to come up with interactive web sites".

Required:

- (i) Define an "interactive website". (2 marks)
 - (ii) Analyse four ways you could make a website interactive. (8 marks)
- (Total: 20 marks)**

QUESTION FIVE

(a) The rise of easy-to-use "what you see is what you get (WYSIWYG)" software has contributed to the overall growth of the web development industry.

With respect to the above statement, state three generic WYSIWYG web development software. (3 marks)

- (b) (i) Distinguish between "white hat" and "black hat" search engine optimisations. (4 marks)
- (ii) Explain the term "usability testing" as it relates to a website. (3 marks)
- (c) Highlight two pros and two cons of uploading your e-commerce website to a shared host. (4 marks)
- (d) Using the iframe tag, write a HTML code to demonstrate how you could display a nested webpage. (4 marks)
- (e) Differentiate between an "add on" and a "patch" as used in website development. (2 marks)

(Total: 20 marks)

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