# KASNEB

## DICT LEVEL III

## PRINCIPLES OF WEB DEVELOPMENT
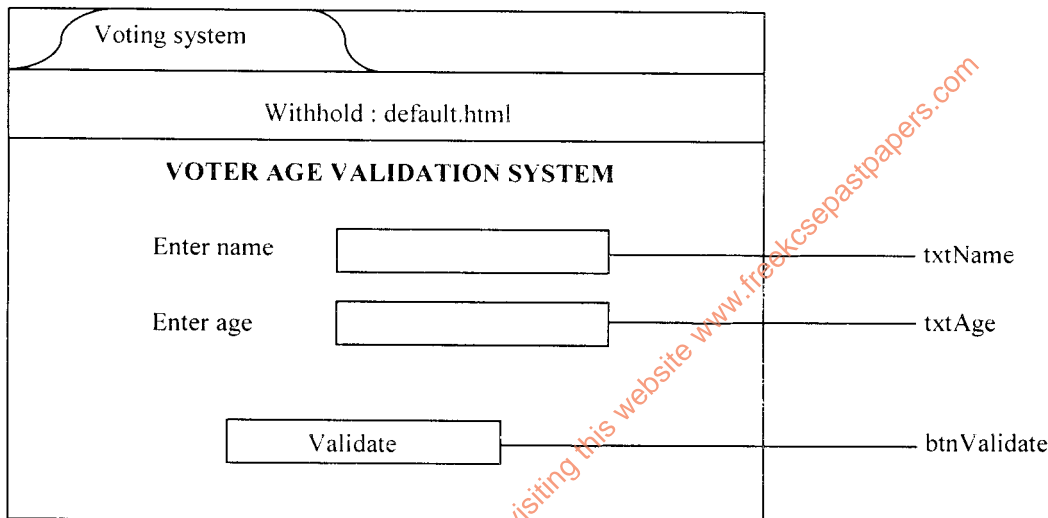
**TUESDAY: 23 May 2017.**  **Time Allowed: 3 hours.**

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

### QUESTION ONE
(a) Highlight four limitations of HTML. (4 marks)

(b) You have been tasked to come up with a simple voter validation system whose user interface is shown in the diagram below:



**Required:**
(i) Write a JavaScript function, "validateVoter" that will validate the content of the textbox "txtAge". If the age is below 18 years, a popup showing, "You cannot vote" should display, otherwise, the popup should show, "You can vote". (6 marks)

(ii) Assume the function in (b)(i) above was written in a file named "voting.js". Write a complete HTML code to come up with web interface displayed above.

Ensure that the function in (b)(i) above is called at the click of the button "btnValidate". (10 marks)
**(Total: 20 marks)**

### QUESTION TWO
(a) Enumerate two reasons why it would be a good idea to use <heading> tags when designing a web page instead of using <font> tags to define the structure of the page. (4 marks)

(b) Explain how you would use the <embed> X/HTML tag to insert Scalable Vector Graphics (SVG) and Flash (SWF) to enable the web pages to be read by older browsers. (3 marks)

(c) State the function of the following tags used in HTML documents type declaration:

(i) <!DOCTYPE> (1 mark)

(ii) <META> (1 mark)

(d)    Explain the procedure you would use to create the following four HTML pages from a template in DreamWeaver:

1. School.html
2. Staff.html
3. Training.html
4. Questions.html

(4 marks)

(e)    Show the output of the following HTML code:

```
<table border  = "0" cellspacing = "4">
<tr>
  <td align = "right" valign = "baseline" nowrap = "nowrap">Width: </td>
  <td  nowrap  = "nowrap">
  <input name  = "the width" type =  "text" class = "smallNumOrChar" id = "attri:table:width"
  attname = "width"/ >
  </td>
</tr>
<tr>
  <td align = "right" Valign = "baseline">Border: </td>
  <td  nowrap = "nowrap">
  <input name = "the border" typetext = "text" class = "smallNumOrChar" id = "attri:table:border"
  attname = "border"/ >
  </td>
</tr>
</tr>
  <td align = "right" Valign = "baseline" nowrap = "nowrap">Cellspacing: </td>
  <td nowrap ="nowrap">
  <input name = "the cell spacing" type = "text" class  = "smallNumOrChar" id = "attri:table:
  cellspacing" attname = "cellspacing"/>
  </td>
  </tr>
<tr>
  <td align = "right" Valign = "baseline" nowrap = "nowrap">Background color: </td>
  <td  nowrap = "nowrap">
<input type = "mmcolorbutton" name = "backcolorpicker" value = " " OnChange = "updateUI('backcolorpicker')">
<input name  = "thebackcolor" type="text" class="smallTField"
  id ="attr:table:backcolor" onBlur = "updateUI ('backcolor')"Value = " "
  attname = "bgcolor" >
  </td>
</tr>
</table>
```

(7 marks)
(Total: 20 marks)

## QUESTION THREE

(a)    Mamboleo online leather shop is a rapidly expanding e-store.  The proprietor of the leather shop wishes to ensure that customers browse all items available in the store.

**Required:**
Explain why creating an active server page (ASPX) and connecting it to a database would be a good way for Mamboleo's web site to present the available items. (2 marks)

(b)    Outline three common types of basic animations used on the web. (3 marks)

(c)    Describe the following terms:

(i)     Plug-in. (1 mark)

(ii)    Java applet. (1 mark)

(d) (i) Define the term "web hosting". (2 marks)

(ii) Describe two methods that web developers could use to host their websites. (2 marks)

(e) As a web development project manager, you begin a site development after all the stakeholders have signed off on the project plan. However, over the course of the project, several stakeholders request for additional sections and functionality to the site. Initially, these requests are small and seem to have a minimal impact on the development team. However, you realise that the additional tasks will increase the cost and time to complete the project to an unacceptable degree.

**Required:**
Discuss how these incremental changes would undermine the success of a project. (6 marks)

(f) List three ways that you could add links to text in DreamWeaver after selecting the text. (3 marks)
**(Total: 20 marks)**

## QUESTION FOUR
(a) Differentiate between the following terms as used in web development:

(i) "Cookie" and "cache". (4 marks)

(ii) "Tag" and "attribute". (4 marks)

(b) Identify the errors in the following JavaScript code and rewrite the code correctly:

```
<script lang = "JavaScript">
    var A = 10;
    var B = 6;
    switch A% B
    {
            case 0;
                document.write ("The input is ");
                break;
            case1;
                document.write ("The colour is :')
                break
            else;
                document.write ("You didn't choose")
    }
</script>
```
(3 marks)

(c) (i) Describe three HTML list tags. (3 marks)

(ii) Write HTML code to demonstrate each of the tags mentioned in (c)(i) above (6 marks)
**(Total: 20 marks)**

## QUESTION FIVE
(a) An organisation's website uses the B2B business model. It sells its products to an intermediate buyer who then sells the products to the final customer.

**Required:**
(i) Suggest an example in real life scenario to depict the above model. (2 marks)

(ii) Draw a flow diagram to illustrate the scenario suggested in (a)(i) above. (4 marks)

(b)    Describe the functions of the following CSS style attributes :

   (i)     Text-decoration.                                                                                (1 mark)

   (ii)    Font-style.                                                                                      (1 mark)

   (iii)   Font-family                                                                                      (1 mark)

   (iv)    Font-weight.                                                                                     (1 mark)

(c)    You are required to design a footer with the following details:

   1.    A page with the date of last modification in the browser created using JavaScript.
   2.    Text that reads "Questions or comments about website? Please send us an email."
   3.    The "Please send us an email" part of the text is a link to mailto: kasneb@kasneb.example.or.ke

   The footer should finally look as shown below:

   _____

   Contact Us   /   Disclaimer   /   Equal Opportunity   /   Privacy Statement

   Questions or comments about the website? Please send us an email

                    This script creates a "last update" stamp
   _____

**Required:**
   (i)     Describe the property that makes the footer stay at the bottom of the page.            (2 marks)

   (ii)    Write the part of HTML code that will reproduce the footer illustrated above.          (8 marks)
                                                                                       **(Total: 20 marks)**

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