



**kasneb**

**DICT LEVEL III**

**PRINCIPLES OF WEB DEVELOPMENT**

**TUESDAY: 22 May 2018.**

**Time Allowed: 3 hours.**

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

**QUESTION ONE**

- (a) (i) Explain four new features inbuilt in HTML5. (4 marks)
- (ii) Differentiate between “Canvas” and “SVG” as used in HTML5 for graphics. (4 marks)
- (b) Using HTML code, illustrate the font tag for Arial font showing eight different sizes of font each with its own colour. The word “WELCOME”, each on its own line should be used to illustrate the above font tag. (4 marks)

- (c) Write down HTML code that would create a table with the following data:

Community	Male	Female
OBC	35	40
SC/ST	23	12
GEN	12	10

(8 marks)  
**(Total: 20 marks)**

**QUESTION TWO**

- (a) Describe the following types of positioning as used in HTML pages:
- (i) Static positioning. (1 mark)
- (ii) Relative positioning. (1 mark)
- (iii) Absolute positioning. (1 mark)
- (iv) Fixed positioning. (1 mark)

- (b) Write the HTML code that would display the following content on being rendered by a browser:

I love my country.  
• I buy food freely.  
• I exercise my rights.  
• I cheer up my people.  
The end!

(4 marks)

- (c) “Use of frames in web development is steadily losing popularity”.

Highlight four reasons in support of the above statement.

(4 marks)

- (d) Use the <layer> tag with appropriate dimensions to create an html document with three overlapping layers.

Ensure that the back layer is red, the middle layer is blue and the front layer is green.

(8 marks)  
**(Total: 20 marks)**

**QUESTION THREE**

- (a) Explain the following terms in the context of web design:
- (i) Web browser automation. (2 marks)
  - (ii) Plug-ins. (2 marks)
- (b) Citing an example of a programming language used in each case, explain the following terms as used in web programming:
- (i) Front-end. (2 marks)
  - (ii) Middle ware. (2 marks)
  - (iii) Back-end. (2 marks)
- (c) Write JavaScript code to perform the following tasks:
- (i) Declare three variables; one number and two strings. The number should be 20, and first and second strings should be "20" and "Twenty" respectively. (3 marks)
  - (ii) Declare an array called 'numbers'. Numbers should contain 3 elements. Assign the variables declared in (c)(i) above in the 'numbers' array. (3 marks)
  - (iii) Resize the numbers array in (c)(ii) above so as to contain two extra numbers, 45 and 30. (2 marks)
  - (iv) Use FOR loop to iterate through the numbers in (c)(iii) above and display the numbers in an appropriate pop up. (2 marks)
- (Total: 20 marks)**

**QUESTION FOUR**

- (a) (i) Using a short code example, illustrate how you would use the style attribute to specify the width and height of an image called "html5.gif". (2 marks)
- (ii) Show how you would include the folder name in the above example if the image was stored in a folder called "images". (2 marks)
- (b) Mwandawiro recently designed a web application intended to serve **kasneb** students with tutorials as well as online training in the various subjects they undertake in their course. Mwandawiro is in the process of choosing a web hosting company.

**Required:**

Prepare a list of four items that Mwandawiro should consider before settling for a specific web hosting company. (4 marks)

- (c) (i) Highlight two differences between cookies and local or session storage. (4 marks)
- (ii) Write down the HTML code that would render the output below. Ensure that the background colour specified should be the actual colour behind the text.

Background-colour set by using #FF0000
Background-colour set by using #00FF00
Background-colour set by using #FFFF00
Background-colour set by using #FFFF00
Background-colour set by using #FF00FF
Background-colour set by using #00FFFF

(8 marks)  
**(Total: 20 marks)**

**QUESTION FIVE**

- (a) Citing five reasons, justify the use of animation in e-commerce websites. (5 marks)
- (b) A web developer has an image which he wants to insert inside his text in Photoshop. He has already duplicated the image into two layers named: Background layer and Layer 1. He has also added a third blank layer (Layer 2) between the other two layers and given it a white background. Further, he has entered text and positioned it correctly on its own layer between Layer 1 and Layer 2. However, he is unable to insert the image in Layer 1 into his text to create the illusion that the image is inside the text.

**Required:**

Guide him on the final steps to follow so that the image could be seen through the text. (5 marks)

- (c) Prepare a step by step instruction on how to create a bouncing ball animation with motion tweening in flash.

Use frame1, frame5 and frame10 in your key frame to create the animation in your sequence. (10 marks)  
**(Total: 20 marks)**

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