

NATIONAL UNIVERSITY OF LESOTHO

BACHELOR OF LIBRARY AND INFORMATION STUDIES

LIS 4308: ADVANCED INTERNET AND WEB DESIGN

JUNE 2023

MARKS: 100

TIME: 3 HOURS

Instructions

- This is a *closed book* examination.
 - Answer **ALL** questions
 - Each question carries **20** marks.
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QUESTION 1

(a) Differentiate between the following paired terms:

- i. tag and element. (2)
- ii. blockquote and q elements. (2)
- iii. ul and ol. (2)
- iv. dl and dt. (2)
- v. id and class selectors. (2)
- vi. article and section. (2)

(12)

(b) How do you remove the bullets from an unordered list using CSS? Show with example.

(4)

(c) What element would you use to provide the full name of the W3C (World Wide Web Consortium) in the document? Write down the complete mark-up for that.

(4)

[20]

QUESTION 2

(a) Mention the attributes to be included in every **img** element. (2)

(b) Write the markup for adding an image called *library.jpg* that is in the same directory as the current document. (2)

(c) Give any two reasons why it is necessary to include an alternative text in the image element. (4)

(d) Identify any five errors in the following table markup. (10)

```
<caption>Primetime Television 1965</caption>
<table>
  Thursday Night
  <tr></tr>
  <th>7:30</th>
  <th>8:00</th>
  <th>8:30</th>
  <tr>
    <td>Shindig</td>
    <td>Donna Reed Show</td>
    <td>Bewitched</td>
  <tr>
    <colspan>Laredo</colspan>
    <td>Daniel Boone</td>
  </tr>
</table>
```

(e) What color will the paragraphs be when this embedded style sheet is applied to a web document? Why? (2)

```
<style type="text/css">
  p { color: purple; }
  p { color: green; }
  p { color: gray; }
</style>
```

[20]

QUESTION 3

(a) Explain any three best practices for writing a clean and maintainable HTML5 code. (6)

(b) State clearly, ways in which seven semantic HTML5 tags can be used for layout and positioning in web design. (14)

[20]

QUESTION 4

- (a) Describe the box model in CSS3, and how you can use it to position and style HTML elements. (4)
- (b) Mention any three common CSS3 layout techniques, and three factors to be considered when choosing the best one for your design needs. (6)
- (c) Describe each of the following positioning methods in web design: (8)
 - i. Static (2)
 - ii. Fixed (2)
 - iii. Absolute (2)
 - iv. Relative (2)
- (d) How does the *clear* property in CSS work and why is it important when using *floats* for layout design? (2)

[20]

QUESTION 5

- (a) Explain any two benefits of using *flexbox* over *floats* for a web design layout. (4)
- (b) Describe how the grid system in CSS works, and how it can be used to create complex layouts. (4)
- (c) Explain any three ways of using HTML5 and CSS3 to create responsive designs that adjust to different screen sizes and devices. (6)
- (d) How can you center an element horizontally and vertically on a web page using CSS flexbox? Explain with flexbox properties and values you can use. (6)

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