Programme	**Diploma in Information Technology**
Module	**Web Development 2B**
Module Code	**WPD 220**
Module NQF Level	**6**
Credits	**15**
Exam	**Supplementary Exam Memorandum**
Semester	**2nd**
Date Written	**29 January 2020**

Total marks	**100**
Duration	**2 hours**
Pass mark	**50%**
Weighting	**60%**
Examiner	**John Alloziem**
Moderator	**Thabiso Mathebula**

This question paper consists of **12** pages including the cover page.

REQUIREMENTS:

Learner Requirements: Stationery and Examination Answer booklet

Equipment Requirements: Computer

This paper consists of:

1.	Section A:	**29 marks**
2.	Section B:	**47 marks**
3.	Section C:	**24 marks**

ALL sections are **COMPULSORY**. It is in your own interest to write legibly and to present your work neatly.

PLEASE READ THE ASSESSMENT RULES AND REGULATIONS THAT FOLLOW

Learners are warned that contravening any of the examination rules or disobeying the instructions of an invigilator could result in the examination being declared invalid. Disciplinary measures will be taken which may result in the students' expulsion from Damelin.

ASSESSMENT RULES AND REGULATIONS

Please ensure that you have read and fully understand the following assessment rules and regulations prior to commencing with your assessment:

1. To be permitted access to the examination, a learner must arrive with:
   - an Identity Document or other official proof of identity (for example,
   - a student card, passport or driver's licence card with photo); and
   - the required exam stationery.
2. No learner may enter the examination room more than 30 minutes after the examination sitting has commenced and no candidate may leave the room less than one hour after the examination sitting has commenced.
3. No extra time will be allowed should a student arrive late.
4. All learners must sign the *Attendance Register* for the examination on arrival.
5. It is the responsibility of learners to familiarise themselves with the examination rules prior to sitting for the examination.
6. All examinations are to be written on the date and time officially stipulated by the College.
7. It is the responsibility of learners to ensure that they are writing the correct paper and that the question paper is complete
8. Cell phones must be switched *off* prior to entering the exam venue. Cell phones and wallets may be placed under candidates' chairs rather than at the front of the room.
9. Learners may not handle cell phones or wallets during the exam.
10. No weapon of any description may be taken into the assessment room.
11. All personal belongings are to be placed at the front of the examination room. Personal belongings brought to the examination are at the owner's risk.
12. Smoking is not permitted and learners will not be allowed to leave the examination room in order to smoke
13. Once the examination has commenced, all conversation of any form between candidates must cease until after candidates have left the room, after the examination.
14. *Only* the official College examination book, as supplied by the College, may be used.
15. Learners must ensure that their student number is written on the answer book.
16. Learners are responsible for ensuring that they follow the instructions in the examination for submitting their answers.
17. Please read the instruction appearing on the examination paper carefully
18. The number of every question must be clearly indicated at the top of every answer.
19. No pages may be torn out of the answer book. All question papers and scrap paper must be handed to the invigilator after the examination.
20. Learners finishing earlier are to leave the examination room as quietly as possible on the instruction of the invigilator, and may not talk until outside the building where the examination is being written.
21. Only under exceptional circumstances will a learner be permitted to leave the examination room during the examination, and if the invigilator gives permission. An invigilator must accompany the learner. Only one learner at a time may be absent from the examination room.
22. Candidates may not act dishonestly in any respect.

SECTION A: **[29 MARKS]**

Question 1 **(9 marks)**

Multiple Choice Questions: Each question has a choice of four/five statements. For each question, read the instruction and write the correct letter next to the corresponding question number. Example: 3.1 C

1.1 What is the value of z in the following code?

```
<html>
  <body>
    <script>
      var x = 12.45;
      var y = 1;
      var z = '8' + x + y;
      document.write(z + "<br>");
    </script>
  </body>
</html>
```

A. 813.451
B. 21.450
C. 21.451
D. 812.451 √

1.2 What will be the output of the following code?

```
<!DOCTYPE html>
<html>
  <body>
    <script>
      var x = "5";
      var y = 6;
      var z = x + y;
      document.write(x + "<br>");
      document.write(y + "<br>");
      document.write(z + "<br>");
    </script>
  </body>
</html>
```

A. 5 6 56 √
B. 5 6 11
C. None of These
D. 5 6 10

1.3 What will be the output of the following code ?

```
<html>

  <body>
```

```
    <script>
      var x = 5;
      var y = 6;
      document.write((x + y) + "<br>");
    </script>
  </body>

</html>
```

A. No Output
B. 11 √
C. 56
D. Error

1.4 What will be the value of Variable - "num3" ?

```
var num1;
var num2 = 10;
var num3 = num1 + num2;
```

A. 10
B. None of these
C. undefine10
D. undefined √

1.5 Variables declared inside function are visible _____.

A. to all the functions
B. Inside the function in which they are declared √
C. None of these
D. All the scripts inside save JS File

1.6 What will be the output of the following ?

```
<script type="text/javascript">
   var name;
   name = "Pritesh";
</script>
<script type="text/javascript">

   document.write(name);
</script>
```

A. Nothing will be printed
B. Pritesh √
C. Error
D. None of these

1.7 Integer Variable is declared using following syntax in JavaScript.

A. var num; √
B. int num;.
C. Integer num;
D. integer num;

1.8 Variable can hold _____ value at a time

A. Single √
B. Multiple
C. Double
D. None of these

1.9 What will be the Output of the Code below?

```
<html>
<body>
<script type="text/javascript">
<!--
document.print("Hello");
//-->
</script>
</body>
</html>
```

A. Will Throw Error
B. Hello √
C. None of These
D. Will not print anything because of Comment

QUESTION 2 **(20 marks)**

True and False Questions: Indicate whether the following statements are true or false. Choose the answer and only write true or false next to the question number in the ANSWER BOOK. If the answer is False, please motivate your answer.

2.1 It is regarded as a best practice to code using syntax that follows the stricter syntax rules, which are based on XML rules. True√√

2.2 JavaScript uses the parseFloat() for many conversions. False √√

2.3 To write more complex programs in any language, you need something called control flow. True√√

2.4 JavaScript uses the string() function to convert strings and other values to numbers. False √√

2.5 Users across the globe use different connection speeds. True √√

2.6 The logical operator AND returns true if the comparisons on both sides of the && operator are true or false. False√√

2.7 A function can be placed in the head section of a web page or in the body section of the web page. True√√

2.8 A function handles many tasks at a time to produce a result. False√√

2.9 A variable declared in the body of a function is called a local variable. True√√

2.10 A function can provide its results to another function. True√√

SECTION B: MEDIUM QUESTIONS **[47 MARKS]**
Answer all questions

QUESTION 3 **(47 marks)**

3.1 What will the following functions return? . (10)

6.1 parseInt("115JTRE")
Answer: 115 √√

6.2 var b = parseFloat("348.00")
Answer: 348√√

6.3 var d = parseFloat("67 21 89")
Answer: 67√√

6.4 var g = parseFloat("She was 750 dollars") + "
";
Answer: NaN√√

6.5 var h = parseFloat("11108,40")
Answer: 22108√√

Outcome; Structure and apply functions

3.2 Briefly describe what you understand by the following: **(15)**

1.1 DOM

1.2 Window object

1.3 Document object

1.4 Form object

1.5 Form control elements

Outcome: Understand the different DOM objects

Answer: SU 9

Document Object Model (DOM) refers to the way document content is accessed and modified. The Objects are organized in a hierarchy. This hierarchical structure applies to the organization of objects in a Web document. √√√

Window object – This object is found at the top of the hierarchy. It is the outmost element of the object hierarchy. √√√

Document object – Each HTML document that gets loaded into a window becomes a document object. The document contains the page's contents. √√√

Form object – everything that is enclosed in the <form>...</form> tags sets the form object. √√√

Form control elements – all the elements such as text fields, buttons, radio buttons, and checkboxes defined on the form object. √√√

3.3 Briefly discuss 8 comparison operators used in JavaScript giving the function of each. **(16)**

Outcome: Apply Comparison Operators

Answer: SU 5; Pg 33

Operator	Function
Is equal to ==√	Returns true if the values on both sides of the operator are equal to each other√
Is not equal to != √	Returns true if the values on both sides of the operator√ are not equal to each other
Is greater than >√	Returns true if the value on the left side of the operator is greater than the value on the right side √
Is less than < √	Returns true if the value on the left side of the operator is less than the value on the right side √
Is greater than or equal to >= √	Returns true if the value on the left side of the operator is greater than or equal to the value on the right side √
Is less than or equal to <= √	Returns true if the value on the left side of the operator is less than or equal to the value on the right side √
Strict is equal to === √	Returns true if the values on both sides are equal and of the same type√
Strict is not equal to !== √	Returns true if the values on both sides are not equal or not of the same type √

3.4 What is the result of running the following programs from a function? (6)

```
var x = 5;
var y = 20;
var a = eval("x * y") + "<br>";
var b = eval("4 + 7") + "<br>";
var c = eval("x + 10") + "<br>";
```

Answer:
100 √√
11 √√
15 √√

SECTION C: PRATICAL QUESTIONS **[24 MARKS]**
Answer all questions

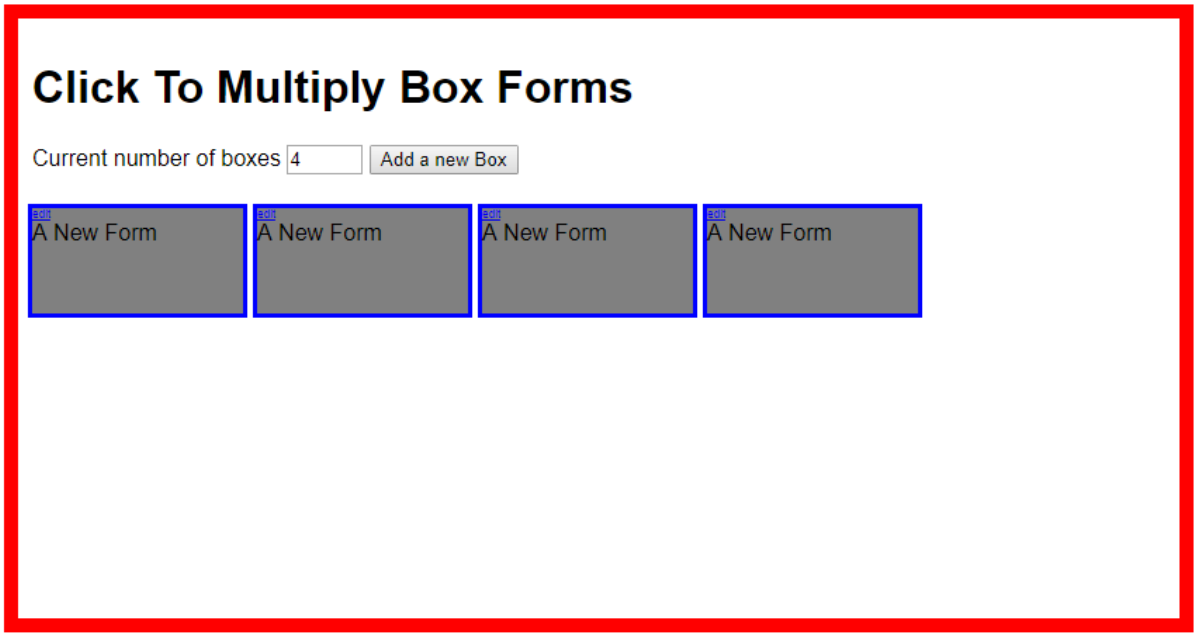
QUESTION 4 **(24 marks)**

4.1	Write a program that will implement the following web forms:	(24)

When the program is run the first time the following displays:

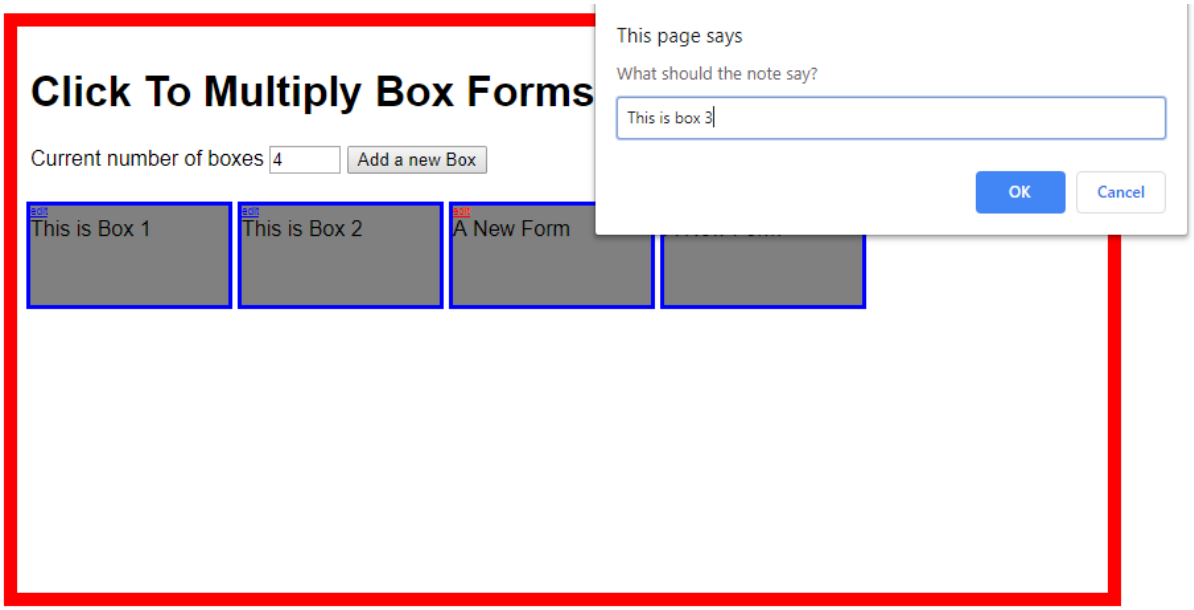
When the "Add a new box button" is clicked the following displays:

When the button is clicked any number of times, the number of clicks is printed in the text box followed by the display of an equivalent number of boxes. See picture below:



When the edit (found on the upper left-hand corner of the box) is clicked an alert is displayed as shown below. Any new text typed into the alert textbox replaces the "New Form" in any of the boxes.

Note that the box inside the layout has two different colours, the outline and the background. The outside layout border line should be red colour.



Use necessary Java script functions to develop the program.

Answer: Study unit 9

```
<html>
<head>
<title>Getting Sticky</title>
<style type="text/css">
* {font-family: Arial}
a {font-size: 6pt}
.editButton {font-size:6pt}
</style> √
<script type="text/javascript">

function getCurrentNumber() {
formElement = document.getElementById("noteForm");
return formElement.childNodes.item(1).value;
} √√√

function incrementCurrent() {
current = parseInt(document.forms["noteForm"].total.value);
document.forms["noteForm"].total.value = current + 1;
} √√√

function makeNewNote(){
mainDivElement = document.getElementById("mainDiv");
newNote = document.createElement("div");
newNote.setAttribute("id", "note"+getCurrentNumber());
newNote.style.width="150";
newNote.style.height="75";
newNote.style.border="3px solid blue";
newNote.style.backgroundColor="grey";
newNote.style.position="absolute";
```

```
newNote.style.top=(150);
newNote.style.left=(25 + 160*getCurrentNumber());
editLink = getEditLink("note"+getCurrentNumber());
newNote.appendChild(editLink);
newNote.appendChild(document.createElement("br"));
noteText = document.createTextNode("A New Form");
newNote.appendChild(noteText);
mainDivElement.appendChild(newNote);
incrementCurrent();
} √√√√

function getEditLink(thisId){
editLink = document.createElement("a");
linkText = document.createTextNode("edit");
editLink.setAttribute("href", "javascript:editNote('"+thisId+"')");
editLink.appendChild(linkText);
return editLink;
}√√√

function editNote(editLink){
theDiv = document.getElementById(editLink);
newText = prompt("What should the note say?");
oldNode = theDiv.firstChild.nextSibling.nextSibling;
theDiv.removeChild(oldNode);
newNode = document.createTextNode(newText);
theDiv.appendChild(newNode);
}√√√

</script>
```

```
</head>
<body>
<div id="mainDiv" style="height:60%; width:60%; border:10px solid red;

padding: 10px; z-index: -100" > √

<h1>Click To Multiply Box Forms</h1> √√
<form id="noteForm">
Current number of boxes <input type="text" name="total" value="0" size="3"/> √√

<input type="button" value="Add a new Box" onclick="makeNewNote()"/>√√

</form>
</div>
</body>
</html>
```