MEMORANDUM

Programme	**Diploma in Information Technology**
Module	**Web Development 2B**
Module Code	**WPD 220**
Module NQF Level	**6**
Credits	**15**
Exam	**Exam Memo**
Semester	**2nd**
Date Written	**… 2019**

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

This question paper consists of **11** pages including the cover page.

REQUIREMENTS:

Learner Requirements: Stationery and Examination Answer booklet

Equipment Requirements: Computer

This paper consists of:

1.	Section A:	**31 marks**
2.	Section B:	**45 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: **[31 MARKS]**

Question 1 **(11 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 How do you call a function named "myFunction"?
- A. myFunction()√
- B. call myFunction()
- C. call function myFunction()
- D. call.myFunction()

1.2 How to write an IF statement in JavaScript?
- A. if i = 5 then
- B. if (i == 5) √
- C. if i == 5 then
- D. if i = 5

1.3 How to write an IF statement for executing some code if "i" is NOT equal to 5?
- A. if (i != 5) √
- B. if i =! 5 then
- C. if (i <> 5)
- D. if i <> 5

1.4 How do you round the number 7.25, to the nearest integer?
- A. Math.rnd(7.25)
- B. round(7.25)
- C. Math.round(7.25) √
- D. rnd(7.25)

1.5 Inside which HTML element do we put the JavaScript?
- A. <js>
- B. <script> √
- C. <scripting>
- D. <javascript>

1.6 Where is the correct place to insert a JavaScript?
- A. The <head> section
- B. The <body> section
- C. Both the <head> section and the <body> section are correct √
- D. The <title> section

1.7 What is the correct syntax for referring to an external script called "xxx.js"?
- A. <script href="xxx.js">
- B. <script src="xxx.js"> √
- C. <script name="xxx.js">
- D. <script href =”xxx.txt”>

1.8 How do you write "Hello World" in an alert box?

A. alertBox("Hello World");
B. msgBox("Hello World");
C. msg("Hello World");
D. alert("Hello World");√

1.9 The Code below contain one executive Statement. Guess the Output of the Code below.

```
<script type="text/javascript">
  {
    document.Write("<h1>This is a heading</h1>");
  }
</script>
```

A. Will not print anything √
B. Just "This is a heading" will be printed because HTML tags are not allowed
C. None of these
D. "This is a heading" will be printed in H1 heading

1.10 Java Script have following type of Comment(s) – select two
A. HTML Style Comment
B. Multiple Line Comments √
C. Enhanced Comments
D. Single Line Comment √

1.11 During addition of two numbers, suppose one of the number is NaN, the output of the code will be?
A. Zero
B. Null
C. NaN √
D. Infinite

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 **[45 MARKS]**
Answer all questions

QUESTION 3 **(45 marks)**

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

6.1 parseInt("7113JTRE")
Answer: 7113 √√

6.2 var b = parseFloat("125.00")
Answer: 125√√

6.3 var d = parseFloat("74 45 66")
Answer: 74√√

6.4 var g = parseFloat("She was 400 dollars") + "
";
Answer: NaN√√

6.5 var h = parseFloat("11209,40")
Answer: 11209√√

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 Tabulate the difference between JavaScript and Java. **(10)**

Outcome: Differentiate between JavaScript and Other Languages
Answer:

JavaScript	**Java**
Interpreted (not compiled) by client. √	Compiled bytecodes downloaded from server, executed on client. √
Object-oriented. No distinction between types of objects. Inheritance is through the prototype mechanism, and properties and methods can be added to any object dynamically. √	Class-based. Objects are divided into classes and instances with all inheritance through the class hierarchy. Classes and instances cannot have properties or methods added dynamically. √
Code integrated with, and embedded in, HTML. √	Applets distinct from HTML (accessed from HTML pages). √
Variable data types not declared (dynamic typing). √	Variable data types must be declared (static typing). √
Cannot automatically write to hard disk. √	Cannot automatically write to hard disk. √

3.4 Write down the general syntax for the while loop in JavaScript using a simple example. (5)

Outcome: Conditional Statements
Answer:
counter = 1 √
while (counter < 11) √√
{
document.write(" counter = " + counter + "
")
counter++ √
} √

3.5 Write down the general syntax for the Do ... While loops in JavaScript. (5)

Answer:
do √
statement √√
while (condition) √√

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

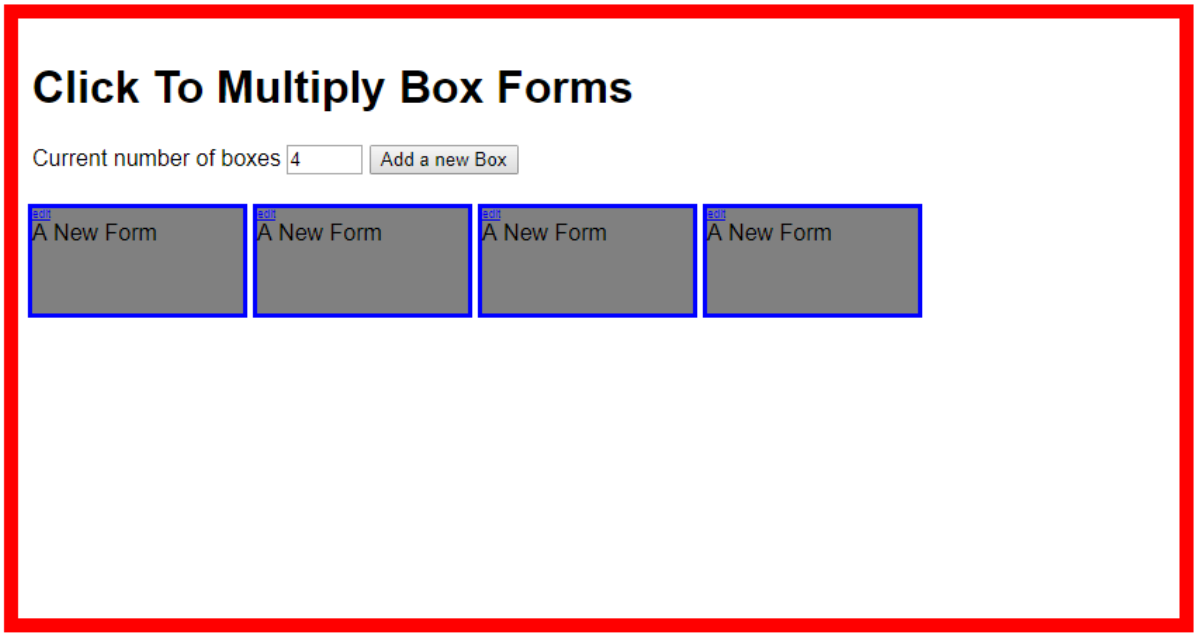
QUESTION 4 **(24 marks)**

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

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

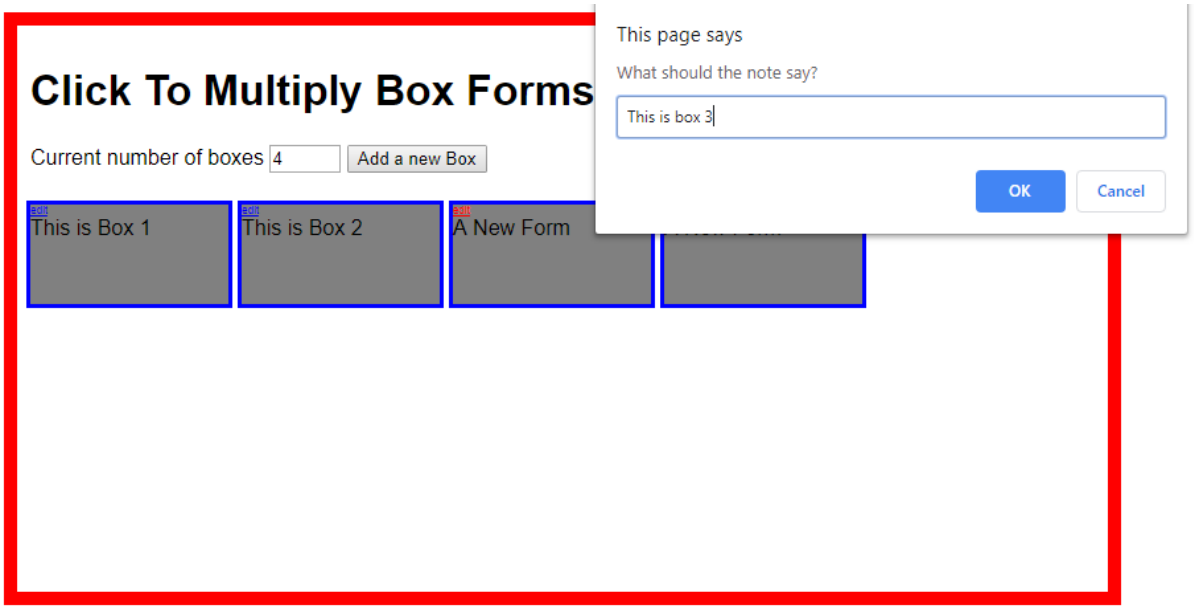
When the "Add a new box button" is clicked the following displays:

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.

Outcome:

- Work with objects
- Applying DOM
- Understand the different DOM objects

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>
```

∞*End of Question Paper*∞