

The Royal University of Bhutan
Paro College of Education
Autumn Semester Examination-2012.

B.Ed(S)II - Introduction to Scripting(ICT205)

Full Mark:100

Pass Mark:50

Time:3 hrs

Instruction 1: *Do not write for the first 10 minutes. This time is to be spent in reading the questions. The question paper consists of two sections A and B. You must read the questions carefully and ensure how many questions are required to answer from each section. Also must note time duration for writing each answer and follow the instruction for each section.*

Instruction 2:

- *Create a folder on the desktop with your student ID Number as folder name and save all your files inside this folder.*
 - *Save Section A in a doc file.*
 - *e.g. Section_A_1:Answer.*
 - *Save all your Section B answers as an html file with the file name as shown below:*
 - *e.g. Section_B_1.html.*
 - *If you have external JS and CSS file, then it should be linked to html file and save as shown below:*
 - *Section_B_1.js or Section_B_1.css.*
 - *Make sure to save your document after every few minutes.*
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Section A – (1x20)

There are 20 questions in this section. Each question carries 1 mark each.

Question 1

Select the appropriate option for each question.

- a. Which of the following are capabilities of functions in JavaScript?
- i. Return a value
 - ii. Accept parameters and Return a value
 - iii. Accept parameters
 - iv. Accepts parameters and keyword

- b. What is the output of following JavaScript code?
- ```
<script type= "text/JavaScript">
 var nam="Pogu hardware shop";
 var res=nam.split(" ");
 document.write(res);
</script>
```
- i. Pogu
  - ii. P,o,g,u,h,a,r,d,w,a,r,e,s,h,o,p
  - iii. Pogu,hardware,shop
  - iv. Pogu hardware shop
- c. What is meant by "this" keyword in JavaScript?
- i. It refers to current object
  - ii. It refers to previous object
  - iii. It is variable which contains value
  - iv. None of the above
- d. What does **isNaN** function do in JavaScript?
- i. Return true if the argument is not a number
  - ii. Return false if the argument is not a number
  - iii. Return true if the argument is a number
  - iv. None of the above
- e. `Math.floor(-20.7)=?`
- i. -21
  - ii. 20
  - iii. -20
  - iv. 21
- f. Which object contains `appName` as its property?
- i. window
  - ii. document
  - iii. browser
  - iv. frame
- g. If  $x=103$  &  $y=9$  then  $x\%=y$ , what is the value of  $x$  after executing  $x\%=y$ ?
- i. 4
  - ii. 3
  - iii. 2
  - iv. 5
- h. How do we create new object in JavaScript?
- i. `var obj={};`
  - ii. `var obj=object();`
  - iii. `var obj=new {};`
  - iv. `var obj=new ();`

i. What command skips the rest of a case statement?

- i. return
- ii. exit
- iii. continue
- iv. break

j. The JavaScript operator '!=' means

- i. both terms must be equal.
- ii. both terms must not be equal.
- iii. both terms must be even.
- iv. both terms must be odd.

k. /\* start code\*/

```
var i=j=10;
If(x<100){
 if(y<50){
 ++i;
 }
 else{
 j++;
 }
}
```

What will be the output of the following code, when x=30 and y=40?

- i. i=11; j=11
- ii. i=10; j=10
- iii. i=11; j=10
- iv. i=10; j=11

l. What does prototype keyword allow you to do in JavaScript?

- i. Change the syntax of JavaScript command
- ii. Modify the definition of built-in objects
- iii. Modify user's browser so only your script will work
- iv. Creates an object instance

m. We reference the computer memory by using

- i. operator
- ii. variable name
- iii. literal value
- iv. variable type

n. How do we assign a function to a variable in JavaScript?

- i. var f=function("x","y", "return x+y")
- ii. var f=function(x,y){return x+y};
- iii. var f=new function("x","y", "return x+y")
- iv. function("x","y", "return x+y")

- o. In JavaScript, which of the following method is used to find out the character at a position in a string?
- i. `charCodeAt()`
  - ii. `CharacterAt()`
  - iii. `indexOf()`
  - iv. `charAt()`
- p. Which of the following is used to remove focus from specified object?
- i. `onMouseup`
  - ii. `onBlur`
  - iii. `onClick`
  - iv. `onFocus`
- q. What property would you use to redirect a visitor to another page?
- i. `document.URL`
  - ii. `window.location.href`
  - iii. `document.locaiton.href`
  - iv. `link.href`
- r. Which method is used to clear the last element from an Array?
- i. `shift()`
  - ii. `push()`
  - iii. `pop()`
  - iv. `slice()`
- s. What JavaScript code is used to create an instance of an object?
- i. `instance`
  - ii. `object`
  - iii. `this`
  - iv. `new`
- t. Which of the following CSS rule would create a heading that is currently hidden in the page?
- i. `H1 {visibility:invisible}`
  - ii. `H1 {Display:none}`
  - iii. `H1 {style:invisible}`
  - iv. `H1 {style:bold}`

## Section B (80 marks)

Answer all the questions from this section.

### Question 2

a. Given the following code:

```
<script type="text/JavaScript">
 for (i=0;i < 10; i++) {
 document.write(i);
 }
</script>
```

- i. Modify the code so that it prints the numbers backwards?
- ii. Modify the code so that it prints only the even numbers?
- iii. Modify the code so that it sums all the values of i and prints the final sum? (10)

b. Suppose you have an array called months that contains the names of the months, "January" through "December". Let monthIndex be a variable that contains the number of a month (0 corresponds to January, 1 corresponds to February, etc). Print out using document.write the actual name of the current month corresponding to the monthIndex? (10)

c. Suppose you have the following html form: (15)

```
<form name="tax">
<input type="text" name="amount" maxlength="8">

<input type="text" name="taxrate" maxlength="4">

<input type="text" name="salestax" maxlength="5">

</form>
```

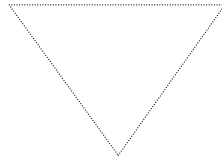
Write a JavaScript code that calculates the sales tax amount as:

**Sales tax = amount \* taxrate**

and stores the result in the salestax form element. You will need to extract the amount and taxrate values from their respective form elements. If the sales tax amount is more than Nu.50 then the amount should be shown in red, otherwise the amount should be shown in the normal black color.

- d. Write JavaScript code that opens new window when clicked on the link incorporating following features. (10)
- There should be two links
  - One opens 10 new windows at a time with message "I have gone crazy"

- The second link opens new window with the message “well come to my House” and should have link inside to close this new window.
  - Make the window 300 pixels tall by 500 pixels wide.
  - Include location bar and a status bar
  - Make the new windows resizable
- Don’t include a toolbar, menu bar, scrollbar or directories.
- e. Create a custom object called **manipulator** with two properties namely **first** and **second**. Set the value of these properties to **10** and **20** respectively. Next add two methods to this object:
- A method called **sum** which adds the **first** and **second**.
  - Another method called **rand** which generates a random number between 1 and 100. (15)
- f. Write code that would draw inverted equilateral triangle as shown below: (10)



- g. The following HTML code contains a Div element with message “I hate you”. Now write JavaScript code that creates new paragraph tag inside the Div element with the message “but I love you”. (10)

```
<Html>
 <Head>
 <Title> Adding nodes </Title>
 </Head>
 <Body>
 <Div> I hate you </Div>
 </Body>
</html>
```