GURU NANAK INSTITUTE OF TECHNOLOGY
An Autonomous Institute under MAKAUT 6 HRC Papers
2022
ADVANCED JAVASCRIPT
IT802E

TIME ALLOTTED: 3 HOURS   FULL MARKS: 70

The figures in the margin indicate full marks.
Candidates are required to give their answers in their own words as far as practicable

GROUP – A
(Multiple Choice Type Questions)
Answer any *ten* from the following, choosing the correct alternative of each question: 10×1=10

		Marks	CO No
(i)	Which type of JavaScript language is ___ a) Object-Oriented b) Object-Based c) Assembly-language d) High-level	1	CO1
(ii)	Which one of the following also known as Conditional Expression: a) Alternative to if-else b) Switch statement c) If-then-else statement d) immediate if	1	CO1
(iii)	In JavaScript, what is a block of statement? a) Conditional block b) block that combines a number of statements into a single compound statement c) both conditional block and a single statement d) block that contains a single statement	1	CO2
(iv)	When interpreter encounters an empty statements, what it will do: a) Shows a warning b) Prompts to complete the statement c) Throws an error d) Ignores the statements	1	CO2
(v)	The "function" and " var" are known as: a) Keywords b) Data types c) Declaration statements d) Prototypes	1	CO1

(vi) What will happen, if the following JavaScript code is executed?   1   CO3

```
var count =0;
while (count <10)
{
console.log(count);
count++;
}
```

a) An error is displayed
b) An exception is thrown
c) The values of count variable are logged or stored in a particular location or storage
d) The value of count from 0 to 9 is displayed in the console

(vii) Which of the following variables takes precedence over the others if the names are the same?   1   CO3
a) Global variable
b) The local element
c) The two of the above
d) None of the above

(viii) Which one of the following is the correct way for calling the JavaScript code?   1   CO3
a) Preprocessor
b) Triggering Event
c) RMI
d) Function/Method

(ix) Which of the following types of a variable is volatile?   1   CO4
a) Mutable variable
b) Dynamic variable
c) Volatile variable
d) Immutable variable

(x) Which of the following option is used as hexadecimal literal beginning?   1   CO1
a) 00
b) 0x
c) 0X
d) Both 0x and 0X

(xi) Which of the following number object function returns the value of the number?   1   CO4
a) toString()
b) valueOf()
c) toLocaleString()
d) toPrecision()

(xii) In JavaScript, what will be used for calling the function definition expression: 1   CO4
a) Function prototype
b) Function literal
c) Function calling
d) Function declaration

GROUP – B
(Short Answer Type Questions)
(Answer any three of the following) 3 x 5 = 15

			Marks	CO No
2.	(a)	Consider the two functions below. Will both the functions return the same thing? Briefly explain your reasoning.	2	CO1

```
function foo1()                     function foo2()
{                                   {
eturn {                             return
    bar: "hello"                        {
};                                        bar: "hello"
}                                       };
                                    }
```

			Marks	CO No
	(b)	Predict the output of the below code snippet. If you get an error; please explain the error?	2	CO1

```html
<!DOCTYPE html>
<html>
<body>
<h2> <strong> Sample: Software Testing Help</strong> </h2>
<p id="sum_first"></p>
<p id="sum_second"></p>
<script>
var sum_first =50+20+' Sajeesh Sreeni ';
var sum_second= " Sajeesh Sreeni "+50+20;
document.getElementById("sum_first").innerHTML = "The
first varaible sum is :"+sum_first +
"<br>The second varaible sum is :"+sum_second ;
</script>
</body>
</html>
```

			Marks	CO No
	(c)	What is the difference between 'var' and 'let' keyword?	1	CO1
3.	(a)	What is the difference between '==' and '==='?	2	CO2
	(b)	How to determine what data type an operand belongs to? Also mention the syntax for the same.	2	CO2
	(c)	What is a ternary operator?	1	CO2
4.	(a)	Which of the following is the correct way of accessing the object property 'first'?	2	CO3

person.name.first,

or

person['name']['first']

			Marks	CO No
	(b)	Why is JavaScript called a loosely typed or dynamic language? Provide examples to support your reasoning.	3	CO3

5. (a) What will be the output of the following code snippet?   3   CO4

```
<!DOCTYPE html>
<html>
<body>
<h2> <strong> Sample: Software Testing Help</strong> </h2>
<p style='text-decoration:underline'>Example for JavaScript
Hoisting </p>
<p id="dispaly_num"></p>
<script>
num = 100; // Assign value 100 to num
elem = document.getElementById("dispaly_num");
elem.innerHTML = "Here the variables are used before
declaring it." +
" <br>The value of the variable is " + num;
var num; // Declare the varaible </script>
</body>
</html>
```

(b) What will be the output of the following code snippet?   1   CO4

```
<script>
// To find the sum of two numbers using closure method
function sum( first_num, second_num )
{
var sumStr = 600;
function add(first_num , second_num)
{
return (sumStr + (first_num + second_num));
}
return add();
}
document.write("Result is :"+ sum(150,350));
</script>
```

(c) Is it possible to break JavaScript Code into several lines?   1   CO4

6. (a) Write the code for adding new elements dynamically?   3   CO4

```
<html>
<head>
<title>t1</title>
<script type="text/javascript">
   function addNode () { var newP = document.
createElement("p");
   var textNode = document.createTextNode(" This is a new
text node");
   newP.appendChild(textNode);
document.getElementById("firstP").appendChild(newP); }
</script> </head>
<body> <p id="firstP">firstP<p> </body>
</html>
```

(b) What is an undefined value in JavaScript?   2   CO4

GROUP – C
(Long Answer Type Questions)
(Answer any three of the following)   3 x 15 = 45

			Marks	CO No
7.	(a)	Consider the following code snippet:	2	CO1

```
for (var i = 0; i < 5; i++) {
  var btn = document.createElement('button');
  btn.appendChild(document.createTextNode('Button ' + i));
  btn.addEventListener('click', function(){ console.log(i); });
  document.body.appendChild(btn);
}
```

			Marks	CO No
		What gets logged to the console when the user clicks on "Button 4" and why?		
	(b)	Provide one or more alternate implementations that will work as expected.	6	CO1
	(c)	What is the difference between 'function declaration' and 'function expression'? Explain with example	7	CO1
8.	(a)	What do you understand by encode URI and decode URI functions? Explain with syntax and examples	5	CO2
	(b)	Write a code to the following :	5	CO2
		Given a string, reverse each word in the sentence.		
		For example "Welcome to this Javascript Guide!" should become "emocleW ot eht tpircsavaJ !ediuG"		
	(c)	What is a Closure and how do you use it?	5	CO2
9.	(a)	What are the characteristics of JavaScript 'Strict Mode'?	6	CO3
	(b)	What is JavaScript 'Strict Mode'?	4	CO3
	(c)	How to handle a large number of choices for one condition in an effective way? Explain with syntax.	5	CO3
10.	(a)	What do you understand by "this" keyword? Explain with examples.	4	CO4
	(b)	Explain what a callback function is and provide a simple example.	4	CO4
	(c)	Are Java and JavaScript similar? If not, then what is the difference between Java & JavaScript?	7	CO4
11.		Is JavaScript a case-sensitive language? How?	15	CO3