**JAVASCRIPT**

**Chapter-1**

**MCQ + OBJECTIVE QUESTIONS**

**What is JavaScript?**

1. JavaScript is the “engine” that makes things move on a page; by working with dynamic design elements. It is a range language too.
2. JavaScript allows designers to release those aspects of design creativity that cannot be expressed in static (w¯’i) HTML.
3. JavaScript makes HTML pages more dynamic and interactive.

**What is HTML?**

Hypertext Markup Language, a standardized system for tagging text files to achieve font, color, graphic, and hyperlink effects. As a markup language, HTML describes a web page as a static entity.

**What is the most dynamic element in HTML?**

The most dynamic element in HTML, beside the link, is event-related attributes. For example:- on click is one of the event-related attributes of HTML.

**Does HTML have any dynamic components?**

No. It relies on scripts written in JavaScript.

**Where is a JavaScript written? Give an example.**

Most of the JavaScript is written in a tag container named script. Script container is required for most JavaScript. The generic format looks like the following:

<script language=”JavaScript”>

Script goes here

</script>

**What is parser?**

The parser is the interpreter (অনুবাদক) that reads the code one line at a time, beginning with the top line.

**What are the features of JavaScript?**

1. JavaScript can add to a web site dynamic interactivity (change in response to an action).
2. JavaScript is an object-based scripting language.
3. Giving the user more control over the browser.
4. It Handling dates and time.
5. It Detecting the user's browser and OS,
6. It is light weighted.
7. JavaScript is a scripting language and it is not java.
8. JavaScript is interpreter based scripting language.
9. JavaScript is case sensitive.
10. JavaScript is object based language as it provides predefined objects.
11. Every statement in JavaScript must be terminated with semicolon (;).

**What is alert?**

Alert is a useful built in function in JavaScript. It sends a message to the page. The contents of the message can vary depending on what the user does or message can be static.

**What does a built-in function do in JavaScript?**

Built-in functions execute a set of instructions to do things like put message on the screen, prompt users to enter information and write text to the screen.

**What is prompt in JavaScript?**

The prompt () method displays a dialog box that prompts the visitor for input. It can take two arguments. The prompt () method returns the input value if the user clicks "OK". If the user clicks "cancel" the method returns null. Syntax: prompt (text, default Text). Prompt takes two arguments: 1. Prompt message 2. Optional placeholder.

**What is function?**

Functions are self-contained clusters of JavaScript. It works and launched in the same way. It is used in two ways-

1. Alert and prompt

2. User-defined

**What is user-defined function?**

It is one that the programmer writes and uses in his/her page.

N.B Browsers act as a translator between JavaScript and native language.

**Function used in Array**

Here we will discuss about some functions which are frequently used in array concept in JavaScript.

|  |  |  |
| --- | --- | --- |
|  | Function | Description |
|  | Concat () | To concats the elements of one array at the end of another array and returns an array. |
|  | sort() | To sort all elements of an array. |
|  | reverse() | To reverse elements of an array. |
|  | slice() | To extract specified number of elements starting from specified index without deleting them from array. |
|  | splice() | It will extract specified number of elements starting from specified index and deletes them from array. |
|  | push() | To push all elements in array at top. |
|  | pop() | To pop the top elements from a |

**Chapter-2**

1. **Write about case sensitivity of JavaScript.**

Answer: JavaScript is a case sensitive interpreted language. It is necessary to pay attention to the cases of everything that typed in JavaScript. Just a little change in case will invalidate the JavaScript code.

1. **“JavaScript is a weakly typed language”- Explain.**

Answer: JavaScript is considered a “weakly typed” or “untyped” language. The type in question here are the *data types*. This means JavaScript will figure out what type of data we have and make the necessary adjustments so that we don’t have to redefine our different types of data.

Chapter-3

1. **What are literals?**

Answer: The raw data that make up the root of data types are called “literals”. Numbers, strings and Boolean values make up the core set of literals in JavaScript.

1. **What are Hexadecimal Literals?**

Answer: Hexadecimal literals are interpreted as binary string, where each pair of digits represents a character. When used in a numeric context, they are interpreted as integers. Base 16 or Hexadecimal Literals have a special preface that the combination of numbers and letters. All Hexadecimal Literals are prefaced by 0x (zero-x), followed by 0-9, A-F characters indicating a Hexadecimal value. For example color red in Hexadecimal is FF0000; in JavaScript, it is written as 0xFF0000.

1. **What are strings?**

Answers: String literals are text, like any programming languages. Any set of characters placed in a quotation marks (single or double) make up a string literal. Numbers in strings are treated as text, not as value that can be calculated. For example:

“Hello!” ; “25” ; “65 Zigatola” etc.

1. **What do you mean by escape sequence? Write down some escape sequence.**

Answers: Escape sequences includes by prefacing a code with a backslash(\) for additional control over string literals. For example the literal \’ prints an apostrophe without affecting the literal itself. Other escape codes include the following-

\n new line

\’ single quote or apostrophe

\” double quote

\\Backslash

Escape sequences works well with the alert( ) function, it does not work the same with write( ) function. The character substitutions for apostrophes and quotes return the same result but the \n sequence does not rather we’ve to use the <br> to achieve a new line.

1. **What are Boolean values in JavaScript?**

Answer: The Boolean values in JavaScript are two literals, *true* and *false* (1 or 0, yes or no). The Boolean literals are derived from logical comparisons, testing a truth value and then using that value (true or false) for another operation. For example:

<script>

var qpt=((45%2)==0)? "hello" : "bye";

document.write(qpt);

</script>

The output will be: “bye”. Because the statement is false.

1. **Write about concatenations in JavaScript?**

Answer: String concatenation refers to binding one or more strings into a single string. For example:

<script>

var a = “Hello”;

var b = “There!”;

var c = a + “ ” + b;

document.write(c);

</script>

The output will be: Hello There!

1. **What do you mean by object? Write some built in object.**

Answer: Objects are collection of properties arranged in a hierarchy. JavaScript supports working with objects. The highest level of objects in the context of JavaScript and an HTML page is the window. Everything in an HTML page is the property of the window object. There are several useful objects already available in JavaScript, and user can create his own. Objects are used for working with specific data and have different functions which help the user in programming tasks.

Objects are unique in some way, even if two or more objects look identical to the user in the browser. Three very important facets of objects define what it is, what it looks like, how it behaves and how scripts control it. Those three facets are properties, methods and event handlers.

Built in Objects: The built-in objects in JavaScript are Date, Math, String, Array, and Object. Each is used in a unique and not-quite-consistent way.

1. **What do you mean by function and return statement?**

Answer: Function is a definition of a set of deferred actions. Functions are invoked by event handlers or by statements elsewhere in the script. Functions carry out actions and return values. A function is a named set of JavaScript statements interpreted all at once by calling the function name. JavaScript has several built-in functions, but programmer can extend the list by writing his own.

Return Statement: The return statement specifies the value to be returned by a function and performs the act of returning that value to where the function was called from. The following example returns the average of three numbers entered as arguments:   
 Code:   
function average(a, b, c)   
{   
   return (a + b + c)/3;   
}

JavaScript supports "return" statements to allow functions to return values back to calling expressions.

1. **What is undefined and null value?**

Answer: An undefined value is returned when we attempt to use a variable that has not been defined or one that is declared but that we forgot to provide with a value. A nonexistent property of an object also returns undefined if it is addressed.

On the other hand, null amounts to a “nothing literal”. We can declare and define a variable as null if we want absolutely nothing in it but we don’t want it to be undefined. Null is not the same as zero in JavaScript.

1. **What are regular expression literals?**

Answer: Regular expressions are patterns used to match character combinations in strings. In JavaScript, regular expressions are also objects. Regular expressions are used to perform pattern-matching and "search-and-replace" functions on text. For example:

<script>

function x()

{

var s= "Good 100%";

var pattern = /\D/g;

var output= s.match(pattern);

document.write(output);

}

x();

</script>

The output will be: G,o,o,d,%