Instructions: (1) All questions are compulsory.  
(2) Illustrate your answers with neat sketches wherever necessary.  
(3) Figures to the right indicate full marks.  
(4) Assume suitable data if necessary.  
(5) Preferably, write the answers in sequential order.

1. Attempt any FIVE of the following: [10]
   (a) State the use of dot syntax in JavaScript with the help of suitable example.  
   (b) List and explain Logical operators in JavaScript.  
   (c) Write a JavaScript that identifies a running browser.  
   (d) Write a JavaScript that initializes an array called "Fruits" with names of five fruits.  
       The script then displays the array in a message box.  
   (e) Give syntax of and explain the use of "with" statement/clause in JavaScript using suitable example.  
   (f) Enlist and explain the use of any two Intrinsic JavaScript functions.  
   (g) State and explain what is a session cookie?

2. Attempt any THREE of the following: [12]
   (a) What are JavaScript Accessors (setters and getters)?  
   (b) Write a JavaScript program which compute, the average marks of the following students. Then, this average is used to determine the corresponding grade.

<table>
<thead>
<tr>
<th>Student Name</th>
<th>Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advait</td>
<td>80</td>
</tr>
<tr>
<td>Anay</td>
<td>77</td>
</tr>
<tr>
<td>Manyata</td>
<td>88</td>
</tr>
<tr>
<td>Saanvi</td>
<td>95</td>
</tr>
<tr>
<td>Saachi</td>
<td>68</td>
</tr>
</tbody>
</table>

   The grades are computed as follows:

<table>
<thead>
<tr>
<th>Range</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;60</td>
<td>F</td>
</tr>
<tr>
<td>&lt;70</td>
<td>C</td>
</tr>
<tr>
<td>&lt;80</td>
<td>B</td>
</tr>
<tr>
<td>&lt;100</td>
<td>A</td>
</tr>
</tbody>
</table>

   (c) Write a JavaScript that displays all properties of window object. Explain the code.  
   (d) Write a JavaScript function that checks whether a passed string is palindrome or not.

3. Attempt any THREE of the following: [12]
   (a) How to combine array elements into a string?  
   (b) Write a JavaScript function to count the number of vowels in a given string.  
   (c) Write a JavaScript that find and displays number of duplicate values in an array.  
   (d) Write a function that prompts the user for a color and uses what they select to set the background color of the new webpage opened.

4. Attempt any THREE of the following: [12]
   (a) State what is a regular expression? Explain its meaning with the help of a suitable example.
(b) With the help of an example explain how to replace text using regular expression?
(c) Write the syntax of and explain use of following methods of JavaScript Timing Event.
   (i) setTimeout()       (ii) setInterval()
(d) How to create banner ads in JavaScript?
(e) Write a program to demonstrate slide menu.

5. Attempt any TWO of the following: [12]
   (a) Write HTML Script that displays textboxes for accepting Name, middle name, Surname of
       the user and a Submit button. Write proper JavaScript such that when the user clicks on
       submit button
       (i) All textboxes must get disabled and change the color to "RED" and with respective
           labels. 
       (ii) Constructs the mail ID as <name><surname>@msbte.com and displays mail ID as
            message. (Ex. If user enters Rajni as name and Pathak as surname mailID will be
            constructed as rajni.pathak@msbte.com).
   (b) Write a webpage that displays a form that contains an input for Username and
       password. User is prompted to enter the input and password and password becomes
       value of the cookie. Write The JavaScript function for storing the cookie. It gets
       executed when the password changes.
   (c) Write a script for creating following frame structure:

       | FRAME 1                   |
       |--------------------------|
       | FRAME2                   |
       | • FRUITS                |
       | • FLOWERS               |
       | • CITIES                |
       | FRAME3                   |

   Fruits, Flowers and Cities are links to the webpage fruits.html, flowers.html,
   cities.html respectively. When these links are clicked corresponding data appears
   in "FRAME3".

6. Attempt any TWO of the following: [12]
   (a) Write HTML Script that displays dropdownlist containing options NewDelhi, Mumbai,
       Bangalore. Write proper JavaScript such that when the user selects any options
       corresponding description of about 20 words and image of the city appear in
       table which appears below on the same page.
   (b) Write a JavaScript function to hide email addresses to protect from unauthorized
       user.
   (c) Create a slideshow with the group of four images, also simulate the next and previous
       transition between slides in your JavaScript.

   ☐ ☐ ☐ ☐ ☐

T.Y. Diploma Sem-V: Paper Discussion Schedule

<table>
<thead>
<tr>
<th>Branches</th>
<th>Date</th>
<th>Day</th>
<th>Timing</th>
<th>Centres</th>
</tr>
</thead>
<tbody>
<tr>
<td>Computer Group</td>
<td>6 Nov. 2019</td>
<td>Wednesday</td>
<td>10 a.m. to 11 a.m.</td>
<td>Thane</td>
</tr>
</tbody>
</table>