Javascript Assignment 2

Note:

i. We have 15 problem statements given below.

ii. Each question carries 3 points.

iii. Write the solution code for all problem statements in a Single Codepen. While you are writing code for a problem statement you can comment the code for previous problem solutions. Whenever you write the solution for any problem statement you can add a comment like:

// ------------ Solution for Problem #3 ------------

iv. Do Not Search for Solutions on Internet.

v. You will find the examples, strings, numbers, arrays given along with the problem statement wherever it's necessary.

Problem statements

Q1. Write a Javascript function to print if the given number is "Perfect Number" or not. A given number is perfect if :
(a) The Number is equal to the sum of its positive divisors, excluding the number itself.
Ex. Number 6 is Perfect number as : (1 + 2 + 3) = 6. Here 1,2,3 are divisors of 6.
(b) Equivalently, the number is perfect if it is equal to half of the sum of all of its positive divisors including itself.
Ex. Number 6 is Perfect number as : (1 + 2 + 3 + 6) / 2 = 6
Numbers to check: (a) 28 (b) 496 (c) 8128 (d) 33550336

Q2. Write a Javascript function to convert the given amount of money into coins which are also given.
Ex. amountTocoins(37, [10, 5, 2, 1]); //Here 37 is the amount. and 10, 5, 2, 1 are coins.
Expected Output: 10, 10, 10, 5, 2

Q3. Write a Javascript function to get the current date which accepts the separator as an argument and prints on the console.
Ex. getCurrentDate("/"); Output => 10/09/2019
Ex. getCurrentDate("-"); Output => 10-09-2019

Q4. Write a Javascript program which will accept a date and time in the future or in the past and it will print how much time is remaining for future date to come or how much time is completed since the past date and display on the console.
Ex and Hint:
You can use the format like this to pass the date and time:
futureDate = new Date("Sep 17, 2019 12:00:00").getTime();
Ex. calcDifference(futureDate);
Output => Time Remaining for Future Date : 6 Days 17 Hours 51 Minutes 40 Seconds

Q5. Write a Javascript Function to find the latest date from the given array of dates.
Given Array: ['2019/02/01', '2018/09/22', '2019/05/15', '2019/03/03']
Output => Latest Date: 2019/05/15

Q6. Write a Javascript function to test if the first character of given string is upper case or not and print it on console.
Given String: (a) 'Yes, it is possible.' (b) 'and it happened.'

Q7. Write a Javascript function to check if the given email address is valid or not, using regular expressions. The valid email address can contain following characters:
   a. Upper case A-Z or Lower case a-z letters
   b. Digits 0-9
   c. Special Characters ! # $ % & ' * + - / = ? ^ _ ` { | } ~
   d. Dot . or period or full stop, and it should not be the first or last character

Q8. Write a Javascript program to check if the given string has date in it of the format mm-dd-yyyy and print the date in console.
Given String: "Avengers Endgame was released on 26-04-2019."

Q9. Write a JavaScript program to count the number of words in string.
Note :
- Remove white-space from start and end position.
- Convert 2 or more spaces to 1.
- Exclude newline with a start spacing
String: "You can check this string.
Which contains this new line.
But it also consider the points in Note given above."

Q10. Write a Javascript program to get the attributes - type, hreflang, rel, target, href and the text in the link given below and print on console.

```
<p>
        <a id="paraLink" type="text/html" hreflang="en-us" rel="nofollow" target="_self"
        href="https://www.edyoda.com/">
                Frontend Developer Program
        </a>
</p>
```

Q11. Write a Javascript program to add rows to a table in the HTML code given below.
Sample HTML Code:

```
<table id="sampleTable" border="1">
        <tr> <td>RowA Cell1</td>  <td>RowA Cell2</td> </tr>
        <tr> <td>RowB Cell1</td>  <td>RowB Cell2</td> </tr>
</table>
```
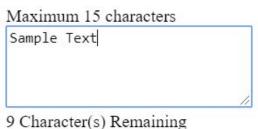
Hint: You can use the inbuilt Javascript functions insertRow() to create a row and insertCell() to create a table cell in the row.

Q12. Write a mul function which will work properly when invoked with following syntax.
console.log(mul(2)(3)(4)); // output : 24
console.log(mul(4)(3)(4)); // output : 48

Q13. Write a program using jQuery to limit the number of characters entered in a textarea and show the remaining count below the textarea once someone types inside the textbox. (Add some HTML content in the HTML section to show the textarea and the remaining chars text below the textarea)
Sample Output:

Maximum 15 characters

Sample Text|

9 Character(s) Remaining

Q14. Write a program using jQuery to count the number of paragraphs in the HTML code given below. Print the content of each p tag in the console.
<div id="selected">
  <p>Red</p>
  <p>White</p>
  <p>Green</p>
  <p>Black</p>
  <p>Blue</p>
  <p>Orange</p>
</div>

Q15. Write a Javascript function that accepts the length and generate a string of given specific length of random characters. You can use the character list given below to generate the random string.
Sample Char List =
"ABCDEFGHIJKLMNOPQRSTUVWXYZabcdefghijklmnopqrstuvwxyz0123456789@#$%&-"
Ex. randomString(8);   // *here the randomString is a function which you have to write*
Output => "t3giAkft"