**Questions**

**HTML CSS:**

1. Give an explanation on these tags and what they do?
   1. <div> : A block element with no specific semantic meaning
   2. <ul> : Unordered list, a list that the order of items is not relevant
   3. <td> : Table data, usually wrapped inside <table> then <tr>, the column inside table row
   4. <thead> : Header for table. Under <table> tag, it can be divided into <thead> and <tbody>. <thead> is usually put on the first row of the table, indicating what the columns of the table are.
   5. <section> : A block element indicate it is a section in a document
   6. <img> : image, usually with src attribute to indicate the source link of image needed to be replaced
   7. <form> : form, usually wrapped with many input tag, enabling user to input something, interact with the website
   8. <label> : Usually inside the form element, before an <input> element. It states what the <input> tag is about
   9. <input> : input, as explained in (g)
   10. <option> : Usually used inside a select element, provide the options that user can select
2. Describe the following common CSS units of length:
   1. cm : centimeter
   2. em : relative size to font size of current element. 1em = width of ‘M’
   3. in : inch
   4. mm : millmeter
   5. px : pixel, the length of pixel vary from devices and their settings. It is a dot of color that the monitor display
   6. vh : viewpoint height, 1vh = 1% of viewpoint height
   7. vw : viewpoint width, 1vw = 1% of viewpoint width
   8. rem : root em, similar as em explained above, except, the reference font size is the default base font size
   9. % : percentage of height or width compared with the parent element

**JavaScript, AJAX, JQuery**

1. What is the use of the ‘this’ keyword?
   1. Can be used in an object or class
   2. Refer to that object or class that it is used inside
2. What is a function?
   1. A script that can be called and reused from other placed in the program
   2. Can take in parameter to run the script
   3. Can also be export to other program for them to call the function
3. Create a function that takes height in cm and weight in kg as parameters, it should return the BMI using the two inputs present.

(weight in kg)

(height in meters) \* (height in meters)

<https://en.wikipedia.org/wiki/Body_mass_index>

Ans:

function calculateBMI(height, weight) {

return (weight/(Math.pow(height,2)));

}

**6)**

Accessing objects in JS

1. **var** car **=** {
2. brands: {
3. BMW: {
4. 6-series: {
5. sold: 1805
6. }
7. },
8. Tesla: {
9. Model-S: {
10. sold: 200
11. },
12. "Model-A": {
13. sold: 14
14. },
15. }
16. }
17. }

Access the number of 6-series cars sold

Ans: car['brands']['BMW']['6-series']['sold']

Access the number of Model-A cars sold

Ans: car['brands']['Tesla']['Model-A']['sold']

**7)**

**var** restaurants **=** [

{name: "Ollies", group: "Castelo Concepts"},

{name: "Wagyu", group: "Castelo Concepts"},

{name: "Zaks", group: "Castelo Concepts"},

{name: "Black Salt", group: "Black Sheep"},

{name: "Salt and Barrel", group: "Black Sheep"}

]

Return an array of just the restaurants in the group Castelo Concepts

Ans:

restaurants.filter(function(e){

return e.group == 'Castelo Concepts'

})

Create an array all the names of the restaurantsI

Ans:

let restName = [];

restaurants.forEach(function(e){

restName.push(e.name);

})

**8)**

Using Getters and Setters create a class called Pet it should take a name and an age

Three methods should be associated with the class, Age() = will return the age of the pet

Age(age) 🡪 sets the age of the animal (resets to the value given)

Info() returns the most updated age and name of the pet in a string.

Initialise a new pet ensure these are the outputs.

Outputs: pet.Age // “I’m 4 year’s old”

pet.Age = 14;

pet.Age // “I’m 14 year’s old”

pet.Info // “My name is {given name}, I am 14 years old”

Ans: refer to 8.js file

**9)**

Construct a button in an html file, when pressed, the button calls this api: <https://randomuser.me/api/>, every time a user presses the button you should add the random user’s name to the html page using JQuery.

Ans: refer to 9 file

**10)**

Construct a button in an html file, when pressed, the button calls this api: <https://randomuser.me/api/>, get information for two users when you have this information fire off a second request to <https://api.sunrise-sunset.org/> api, you will need to pass the users latitude and longitude into the api call, once you have the information using JQuery add the users timezone to the html page as well as the Sunrise and Sunset time.

Ans: refer to 10 file