REVIEW

Tip: If you want to leave any comments on your solutions, you still can by clicking the arrow on the left below, and editing *Your Notes*.

✅ You have successfully submitted your assessment.

▼   ✓   **Challenge #1**   8 / 8 Questions Answered

📝 Your Notes (Editable)   ☰ Your Answers

1. Which of the following statements describes Computer Science?

   ○ The study of problems with solutions
   ○ The study of problems with no solutions
   ○ The study of algorithms
   ● All of the above

2. What do you call a a specific instruction designed to do a task?

   ○ Command
   ○ Process
   ○ Task
   ○ Instruction
   ● None of the above

3. In computer science, algorithm refers to a special method useable by a computer for solution of a problem.

● True
○ False

4. 1. Which of the following is incorrect?
   Algorithms can be represented:

○ as pseudo codes
○ as syntax
● as programs
○ as flowcharts
○ None of the above

5. Which of the following industries does NOT need computer scientists?

○ Medical
○ Banking
○ Education
○ Space Exploration
● None of the above

6. What is the metric for analyzing the worst-case scenario of algorithms in terms of scalability and efficiency called?

○ Parallelism
● Big Data
○ Recursion
○ Big O Notation

7. Which of the following statements IS TRUE about Computer Scientists?

○ They design software but not computers
● They apply innovation and expertise to complex problems
○ They are just programmers
○ All of the above
○ None of the above

8. The act of making something happen on its own, i.e. without any external help or human interference, is called?

○ Engineering
○ Abstraction
● Automation
○ Simulation

✔ **Challenge #2**   11 / 11 Questions Answered

📝 Your Notes (Editable)   ☰ Your Answers

1. Which of the following is not a data type?

● Symbolic Data
○ Alphanumeric Data
○ Numeric Data
○ Numeric Data
○ None of the above

2. What are the entities whose values can be changed called?

- ◯ Constants
- ● Variables
- ◯ Modules
- ◯ Tokens
- ◯ None of the above

3. Which of the following is not an element of a programming language?

- ◯ File I/O
- ◯ Functions
- ◯ Environment setup
- ◯ Basic syntax
- ● None of the above

4. Which of the following best represents the set of features that should be present in a programming language for it to be useful in algorithm implementation?

- ◯ Data structures, variables, abstract data types and binary digits
- ◯ Assignment operators, arithmetic operators and logical operators
- ● Ability to execute instructions one after the other, statements for expressing conditional logic and functionality to repetitively execute instructions
- ◯ Strings, integers, lists and dictionaries

5. Before source code can be compiled, it has to be ___

- ○ parsed
- ○ saved in a separate file
- ○ viewed in a command prompt
- ○ capitalise
- ● None of the above

6. Which of the following programming languages requires a compiler?

- ○ Python
- ● Java
- ○ PHP
- ○ Lisp
- ○ None of the above

7. Which of the following is the best example of automatic type conversion in JavaScript?

- ○ "5" + cats = 5 cats
- ○ "5" + "cats" = "5 cats"
- ● 5 + "cats" = "5 cats"
- ○ "5" + cats = "5 cats"

8. Ask user for a number, ask user for another number, multiply the two numbers, print result..What do you call this set of instructions?

- ○ PHP
- ● An Algorithm
- ○ A Class
- ○ A compliler

9. What is object-oriented programming?

○ A type of programming involving a structured method of creating programs
○ A type of programming not in use anymore
○ A type of programming involving data types representing data structures
○ A type of programming using only numbers
● None of the above

10. How tdo you append a value to an array of Java Script?

○ arr[arr.length+1] = new Arrays()
○ arr[arr.length*1] = value
● arr[arr.length] = value
○ arr[arr.length-1] = value

11. Beginner programmers should start with a development environment

● True
○ False

▼ ✔ **Challenge #3**   (100%)   4 / 4 Tests

🗐 Your Notes (Editable)   {} Solution   ☑ Your Tests

```
1   def number_game(x,y):
2       if x > y:
3           return [n for n in range(y,x) if n%2==0]
4       elif y==x:
5           return []
6       else:
7           return [n for n in range(x,y) if n%2!=0]
```

✔

Challenge #4

▾

🗐 Your Notes (Editable)   ☰ Your Answers

1. Which of the following choices contains the terms that are most closely associated with Object Oriented Programming?

   ○ Abstraction, Inheritance, Polymorphism, Functions
   ● Polymorphism, Methods, Encapsulation, Inheritance
   ○ Encapsulation, Assignments, Polymorphism, Abstraction
   ○ Methods, Assignments, Encapsulation, Abstraction
   ○ None of the above

2. Which was the first purely object oriented programming language developed?

   ○ Java
   ○ C++
   ● SmallTalk
   ○ Kotlin

3. Which Feature of OOP illustrated the code reusability?

   ○ Polymorphism
   ○ Abstraction
   ○ Encapsulation
   ● Inheritance

4. Which among the following best describes polymorphism?

○ 4, 3, 5, 1

● 1, 2, 3, 5

○ 2, 3, 5, 4

○ 5, 2, 4, 1

○ None of the above

5. Which feature can be implemented using encapsulation?

○ Vehicle -> Car -> Truck

○ Pet -> Animal -> Dog

● Person -> Employee -> Manager

○ User -> Admin -> Guest

6. Consider the following code snippet, What is the output of the following code?

```
var o = new F();
o.constructor === F
```

○ 0

○ false

● true

○ 1

7. Which definition best describes an object?

○ ● Instance of a class
○ Instance of itself
○ Child of a class
○ Overview of a class

8. Which of these is a valid interpretation of the expression `foo = X()` ?

○ Create an object foo of class X
○ Assign variable foo an instance of X
○ Set foo to an instance of X
○ A and B
● A, B and C

9. The code `class X(object): def __init__(self, J)` can be interpreted as:

○ Make a subclass X of class object that defines a constructor method that takes self and J as parameters
○ Make a class X of object with a constructor method that has as parameters self and J
● Make a class X that inherits from an object class and has defined a constructor method that accepts as arguments the values of self and J
○ All of the above
○ None of the above

10. What does single-level inheritance mean?

- ○ A subclass derives from a class which in turn derives from another class
- ○ A single superclass inherits from multiple subclasses
- ● A single subclass derives from a single superclass
- ○ Multiple base classes inherit a single derived class

11.

1. What is the output of the following piece of code?

```
class A:

    def str(self):

        return '1'

class B(A):

    def init(self):

        super().init()

class C(B):

    def init(self):

        super().init()

def main():

    obj1 = B()

    obj2 = A()

    obj3 = C()

    print(obj1, obj2,obj3)

main()
```

- ○ 1 1 1
- ○ 1 2 3
- ○ '1' '1' '1'
- ● An exception is thrown

Your Notes (Editable)   {} Solution   ☑ Your Tests

```python
import datetime

class user:
    def __init__(self, name, lastloggedIn = None):
        self.name = name
        self.loggedIn = False
        self.lastloggedIn = lastloggedIn

    def name(self):
        return self.name

    def name(self, value):
        self.name = value

    def is_logged_in(self):
        return self.loggedIn

    def last_logged_in_at(self):
        return self.lastloggedIn

    def log_in(self):
        self.loggedIn = True
        self.lastloggedIn = datetime.datetime.utcnow().strftime("%Y-%m-%d %H:%M:%S")

    def log_out(self):
        self.loggedIn = False

    def can_edit(self, comment):
        if comment.author.name == self.name:
            return True
        else:
            return False

    def can_delete(self, comment):
        return False

# def to_string(self):
    # pass
```

```python
class moderator(user):
    def __init__(self, name):
        user.__init__(self, name)

    def can_delete(self, comment):
        return True


class admin(moderator):
    def __init__(self, name):
        moderator.__init__(self, name)

    def can_edit(self, comment):
        return True


class comment:
    def __init__(self, author, message, replied_to = None, createdAt = None):
        self.createdAt = datetime.datetime.now().strftime("%Y-%m-%d %H:%M:%S")
        self.author = author
        self.message = message
        self.replied_to = replied_to

    def author(self):
        return self._author

    def author(self, value):
        self.author = value

    def message(self):
        return self.message

    def message(self, value):
        self.message = value

    def created_at(self):
        return self.createdAt

    def replied_to(self):
        return self.replied_to

    def replied_to(self, value):
```

```
83              self.replied_to = value
84
85      def to_string(self):
86          if self.replied_to == None:
87              return self.replied_to + " by " + self.author.name
88
```

Challenge #6

11 / 11 Questions Answered

📝 Your Notes (Editable)   ☰ Your Answers

1. JavaScript can be written

   ○ Directly into JS file and included into HTML
   ○ Directly on the server page
   ○ Directly into HTML pages
   ● All of the mentioned

2. Which of these best describes an array?

   ○ A data structure that shows a hierarchical behavior
   ○ Container of objects of mixed types
   ● Container of objects of similar types
   ○ All of the mentioned

3. Of the following statements, which ones can be said to be TRUE?

   1. The time complexity of all single statements is constant

   2. According to the Big O Notation, the time complexity of some statements can be said to be logarithmic

   3. Time complexity can only be expressed by using the Big O notation

   4. Time complexity can be expressed as a differential equation

   5. The time complexity of an algorithm can vary over time

   6. Quadratic time complexity can be expressed as a quadratic equation

   ○ 1, 3 & 5
   ○ 2 & 4
   ○ 5, 2 & 6
   ○ 2 & 6
   ● 2, 4 & 6

4. In relation to both primitive and complex data structures, what CANNOT be said to be TRUE?

1. Primitive data structures are used to represent semantically independent values whilst complex data structures are NOT

2. Complex data structures are used to represent interdependent values

3. Complex data structures are complicated to use whilst basic data structures are simple to use

4. Basic data structures can be used out of the box in a programming language

5. Complex data structures should only be used with a large data set

- ◯ 1 & 3
- ● 4 & 2
- ◯ 2 & 3
- ◯ 3 & 5
- ◯ 5 & 1

5. Entries in a stack are "ordered". What is the meaning of this statement?

- ◯ A collection of stacks is sortable
- ◯ Stack entries may be compared with the '<' operation
- ◯ The entries are stored in a linked list
- ● There is a Sequential entry that is one by one
- ◯ None of the above

6. You are designing an algorithm that ranks website pages by relevance according to the number of times they are viewed by users. Which data structure would be the most useful and efficient for you to use?

- ○ A hash table because data would be efficiently searched and retrieved
- ○ A stack because the website pages would need to be popped and pushed systematically from the ranking list
- ○ A graph because Elizabeth needs data relating to how webpages are connected to each other and how many times they were viewed
- ● A sorted array because all the data relating to web pages needs to be sorted in a ranking order
- ○ None of the above

7. What is the efficiency of an algorithm dependent on?

- ○ The time taken by the algorithm and memory consumption
- ○ The data structure used and memory consumption
- ○ The time taken by the algorithm and data structure used
- ○ None of the above
- ● A & B

You are creating an inventory management system. You want the following features:

1. The name of every item should be linked to its stock level and expiry date

2. The order of the items in the database is not a priority

3. You need to be able to easily lookup data for each item

Which is the best representation of the optimal data structure you should use to manage the data in this application?

○ `Canned Soup , [45 , 16/12/2016]`

○ `'Canned Soup'  '45'  '16/12/2016'`

● `{ 'Canned Soup': [45, '16/12/2016'] }`

○ `'Canned Soup, 45, 16/12/2016'`

○ `[ 'Canned Soup' , 45 , 16/12/2016 ]`

○ `def inventory(item,stock_level,expiry)`

○ `{ 'Canned Soup': 45, 'Canned Soup':16/12/2016 }`

9. What is the output fo the code below?

```
numberGames = {}

numberGames[(1,2,4)] = 8

numberGames[(4,2,1)] = 10

numberGames[(1,2)] = 12

sum = 0

for k in numberGames:

    sum += numberGames[k]

print(len(numberGames) + sum)
```

- ○ 8
- ○ 12
- ○ 24
- ○ 30
- ● 33

10. Which of the following data structures can be used with the "in" operator to check if an item is in the data structure?

- ○ list
- ○ set
- ○ Dictionary
- ● All the above
- ○ None of the above

11. Which of these best describes an array?

- ○ A data structure that shows a hierarchical behavior
- ● Container of objects of similar types
- ○ Container of objects of mixed types
- ○ All of the mentioned

▼ ✓ **Challenge #7** 〔100%〕 5 / 5 Tests

▤ Your Notes (Editable) | {} Solution | ✓ Your Tests

```
1  def digitize(n):
2      my_list = [int(d) for d in str(n)]
3      return my_list
```

▼ ✓ **Challenge #8** 8 / 8 Questions Answered

▤ Your Notes (Editable) | ☰ Your Answers

1. What statement BEST describes why the Big-O notation is a very useful way of analyzing algorithm complexity?

   ○ It is very easy to understand
   ● It focuses on the performance of the algorithm itself, not of the hardware used to run the algorithm
   ○ It gives the average case running time of an algorithm
   ○ It can be used for more than analyzing algorithms

2. Which on the following is a Space Complexity

   ● O(1)
   ○ O(n)
   ○ O(n log(n))
   ○ O(m)
   ○ O(mn)

3. Look at this code snippet which is supposed to print a series of numbers to the screen.

Python

```python
a = 1
while a:
    a += 23
    print a
```

Javascript

```javascript
a = 1

while(a){

  a += 23;

  console.log(a)

}
```

What is wrong with this code snippet and how would you improve it?

- ○ a is being incremented by 23, it needs to be incremented by 1 instead
- ○ a was initialized to 1. It should have been initialized to 0
- ○ Printing a after every loop is inefficient. Print after the loop has ended.
- ● The loop won't end. It needs to have a stopping condition

4. Which of the following is not true about comparison based sorting algorithms?

○ The minimum possible time complexity of a comparison based sorting algorithm is O(nLogn) for a random input array

○ Any comparison based sorting algorithm can be made stable by using position as a criteria when two elements are compared

○ Counting Sort is not a comparison based sorting algorithm

◉ Heap Sort is not a comparison based sorting algorithm.

5. Look at this code snippet:

Python:

```python
def fun(n):
    count = 0
    while(n>0):
        n = n/2
        j = 0
        while(j < n):
            j += 1
        count += 1

    print(count)
    return count
```

Javascript:

```javascript
function fun(n){

    count = 0;

    while(n>0){

        n = n/2

        j = 0

        while(j < n){

            j += 1;

        }

        count += 1;

        console.log(count)

    }
```

```
    return count;
```

What is the running time of this algorithm?

○ O(N)
○ O(NLog(N))
● O(N^2)
○ O(1)

6. Which of the following does the Big O notation denote?

○ Average case run time
● Worst case run time
○ Best case run time
○ Abstract case run time

7. You want to sort the following list using the **bubble sort algorithm** `[14,33,27,35,10]`. What would be the result of the operation?

○ `[5,7,13,15,17]`
○ `[35,33,27,14,10]`
● `[10,14,27,33,35]`
○ `[14,10,33,35,27]`
○ The array cannot be sorted using the bubble sort algorithm

8. Which of the following is not O(n^2)?

(15^10) *n* + *12099*
B
n^1.98
n^3 / (sqrt(n))
(2^20) n

○ (15^10) * n + 12099

○ n^1.98

● n^3 / (sqrt(n))

○ (2^20) * n

○ None of the above

▼ ✓ **Challenge #9**   〔100%〕   2 / 2 Tests

📋 Your Notes (Editable)   {} Solution   ☑ Your Tests

```
1   def my_sort(my_list):
2       even_list = []
3       old_list = []
4       for number in my_list:
5           if isinstance(number, int):
6               if number % 2 == 0:
7                   even_list.append(number)
8               else:
9                   old_list.append(number)
10      even_list.sort()
11      old_list.sort()
12      return old_list + even_list
```

▼ ✓ **Challenge #10**   9 / 9 Questions Answered

📋 Your Notes (Editable)   ☰ Your Answers

1. Say that you have an recursive method, compute(). Is it always possible to write a method that implements compute() with a one line formula?

- ● Yes
- ○ Usually, but not always.
- ○ Almost never
- ○ No

2. Which of these instances BEST describes a scenario that will require you to use recursive functions?

- ○ Printing out numbers from one to ten
- ○ When you want to speed up your program
- ● Arranging elements of a nested list in a particular order
- ○ None of the above

3. Recursive functions are considered to be elegant and clear but that comes with underlying costs. Which of these set of statements is the correct list of disadvantages of using recursive functions?

- ○ They support tail-optimisation, add clarity and use more space
- ● They will always throw Stack Overflow Exceptions when processing big chunks of data, are slower than non-recursive functions and increase space requirements
- ○ They are not-readable, their performance is slow when tail optimisation is performed
- ○ None of the above

4. Say that you have a recursive method, recurrsive() . Is it always possible to write an iterative version of recurrsive() ?

- ● Yes
- ○ Usually, but not always.
- ○ Almost never
- ○ No

5. In general, in a recursive and non-recursive implementation of a problem (program) :

- ○ Both time and space complexities are better in recursive than in non-recursive program.
- ○ Both time and space complexities are better in non-recursive than in recursive program
- ● Time complexity is better in recursive version but space complexity is better in non-recursive version of the program.
- ○ Space complexity is better in recursive version but time complexity is better in non-recursive version of the program.

6. Consider this function:

```
def factorial(number):

    if number == 0 :

        return 1;

    return number * factorial(number-1)
```

What kind of recursion does it use?

○● Tail recursion

○ Binary recursion

○ Augmenting recursion

○ None of the above

7. Which of the following statements is true?

○● Recursion uses more memory compared to iteration

○ Recursion is always better than iteration

○ Recursion uses less memory compared to iteration

○ Iteration is always better and simpler than recursion

8. Do you need an `IF-ELSE` statement to prevent infinite recursion?

○● Yes

○ No

○ Sometimes

9. Consider a definition of method():

```
method(0,N) = N
method(P,Q) = mystery(P-1, Q+1)
```

○ 0

○ 2

○ 4

● 6

✔ **Challenge #11**   ⬭ 100%   5 / 5 Tests

📋 Your Notes (Editable)   {} Solution   ☑ Your Tests

```python
1  def power(a,b):
2      ans = a
3      if b == 0:
4          return 1
5      while b > 1:
6          ans *= a
7          b -= 1
8      return ans
9
```

✔ **Challenge #12**   ⬭ 100%   6 / 6 Tests

📋 Your Notes (Editable)   {} Solution   ☑ Your Tests

```python
1  def count_changes(money, coins, i=0):
2      if money == 0:
3          return 1
4      elif money < 0:
5          return None
6      else:
7          s = 0
8          for i in range(i, len(coins)):
9              coin = coins[i]
```

```
10              if money - coin < coin:
11                  c = count_changes(money - coin, coins, i+1)
12              else:
13                  c = count_changes(money - coin, coins, i)
14
15              if c:
16                  s += c
17          return s
18
19   def count_change(money, coins):
20       return count_changes(money, coins)
```

✔ **Challenge #13**   6 / 6 Questions Answered

📝 Your Notes (Editable)   ☰ Your Answers

1. Which of the following is the correct way to initialize a new Git repository?

☐ git add .
✔ git init
☐ git commit
☐ git start

2. You can type git status at any point while in a git controlled directory to check the status of your files.

⦿ True
◯ False

3. Which of the following commands will stage your entire directory and every non-empty directory inside your current directory?

- ○ git status all
- ○ git commit all
- ● git add .
- ○ git stag

4. We've just created a new file called index.html. Which of the following will stage this one file so we can commit it?

- ○ git status index.html
- ○ git add new
- ● git add index.html
- ○ git commit index.html

5. After staging a file, How would you commit this with the message "adding new authors to index"

- ○ git commit "adding new authors to index"
- ● git commit -m "adding new authors to index"
- ○ git commit .
- ○ git commit message

6. Which of the following commands will create a new branch called brand_new and also check it out?

- ● git checkout -b brand_new
- ○ git branch brand_new
- ○ git checkout brand_new
- ○ None of the above

🗒 Your Notes (Editable)   ☰ Your Answers

1. What BEST describes the term "Software"?

   ○ Software is executable code that serves some computational purpose
   ○ Software is a product developed using well-defined, scientific principles and methods
   ● Software is a collection of executable programming code, associated libraries and documentations
   ○ Software is code that serves a specific requirement

2. What is the work of a systems software engineer?

   ○ A systems software engineer coordinates the construction and maintenance of a company's computer systems
   ○ A systems software engineer analyzes user needs and design
   ○ A systems software engineer constructs and maintains general computer applications software
   ● A systems software engineer develops packaged systems and systems software

3. Which of the choices below include some steps taken in SDLC?

   ● Feasibility study, testing, system analysis, software design
   ○ Testing, coding, modulation, disposition
   ○ Software design, system analysis, documentation, testing
   ○ Iteration, product development, risk management, planning

4. Which of the following statements best describes evolutionary/breadboard prototyping?

○ Building multiple functional prototypes of the various sub-systems then integrating all the available prototypes to form a complete system

● Building functional prototypes with minimal functionality at the beginning which forms the basis of future prototypes on top of which the system is built

○ A prototype is built using little effort with the minimum requirements of the system, and once the requirements are understood, the actual system is developed based off the prototype

○ None of the above

5. Is it true that all software development process models have exactly the same phases?

● Yes

○ No

○ Sometimes

6. Good software must be efficient, adaptable and cheap

● True

○ False

7. Which of the following software development process models is most popularly used in industries?

○ Waterfall model

○ Spiral Model

○ V Model

● Agile Model

8. Is it TRUE that poorly designed software is more costly to maintain than correctly designed software?

○ True

○ False

9. Is it TRUE that Software engineers have other roles apart from just coding the software?

○ True

○ False

Challenge #15   75%   3 / 4 Tests

Your Notes (Editable)   {} Solution   ☑ Your Tests

```python
1   def numbertoordinal(number):
2       n = int(number)
3       if n == 0:
4           return "0"
5       elif n == 1:
6           suffix = "st"
7       elif n == 2:
8           suffix = "nd"
9       elif n == 3:
10          suffix = "rd"
11      elif (n % 10) == 1 and n != 11:
12          suffix = "st"
13      elif (n % 10) == 2 and n != 12:
14          suffix = "nd"
15      elif (n % 10) == 3 and n != 13:
16          suffix = "rd"
17      elif (n == 111):
18          suffix = "th"
19      else:
20          suffix = "th"
21      return str(n) + suffix
```

Challenge #16   10 / 10 Questions Answered

1. Suppose you type `www.google.com` into your browser address bar and hit ENTER, what happens?

○ The address is resolved to an IP address
○ The address is converted to binary
○ The address is encrypted
○ The address is sent to the processor which then resolves it to Google

2. What do WI-FI networks use to transmit data?

○ Infra-red
○ Microwaves
○ UV-Light
● Radio waves

3. Which of the following ports is wrongly matched?

○ 80::HTTP
● 443::SMTPS
○ 23::Telnet
○ 25::SMTP

4. Which of the following status codes are NOT correctly matched?

○ 404 - Page not found
○ 200 - OK
● 201 - Not authorized
○ 301 - Moved permanently

5. Which of the following is NOT a HTTP verb?

○ GET
○ POST
● ADD
○ DELETE

6. Which of the following statements is TRUE?

○ The REST protocol uses XML inside of HTTP commands.
○ The REST protocol uses HTTP verbs
● The SOAP protocol uses HTTP verbs
○ The SOAP protocol is an extension of the REST protocol

7. Which of the following statements best describes MIME types?

● MIME types are format type identifiers for content transmitted over the internet
○ MIME types are sound format types
○ MIME types are communication protocols
○ MIME types are hardware specifications

8. A host computer that is capable of providing information to others is known as a server. Which of the following does NOT describe a client?

● Receives and responds to requests from remote computers
○ Sends requests to a remote computer
○ Displays information in a way a user can understand
○ A computer with a web browser installed

9. Which of the following best describes HTTP (Hypertext Transfer Protocol)?

- ◯ It is the standard protocol that is used to resolve domain names to IP addresses
- ◯ It is the protocol that is used to uniquely identify every resource on the web
- ⦿ It is the protocol responsible for requesting and transmitting web pages
- ◯ This is the main protocol used in the Internet Layer of the TCP/IP Model

10. What is a protocol, as specified in a networking context?

- ◯ It is a process that operates on a specific layer in a networking model
- ⦿ It is a rule specifying a standard way of communicating
- ◯ It is an address that uniquely identifies Internet resources
- ◯ It is a way that allows accessibility of the web

▼ ✓ **Challenge #17**   28 / 28 Questions Answered

🗐 Your Notes (Editable)   ≣ Your Answers

1. You provide the wrong username and password, what status code is the browser supposed to return?

- ◯ 200
- ⦿ 401
- ◯ 501
- ◯ 503

2. HTML(Hypertext Markup Language) has language elements which permit certain actions other than describing the structure of the web document. Which one of the following actions is NOT supported by pure HTML (without any server or client side scripting)pages?

○ Embed web objects from different sites on the same page

○ Refresh the page automatically after a specified interval

○ Automatically redirect to another page upon download

● Display the client time as part of the page

3. How do you add a class 'modal' to the paragraph in the markup below.

`<div class="paragraph">  <p>This is Andela.</p> </div>`

○ `document.getElementByTag('paragraph') = 'modal';`

○ `addClass = 'modal';`

○ `document.getElementById("paragraph") = 'modal';`

● `document.getElementByTag('p').className = 'modal';`

4. Consider the HTML t able definition given below:

```
< table border=1>




 ab


 cd




 ef


 gh


  ik
```

The number of rows in each column and the number of columns in each row are:

○ (2, 2, 3) and (2, 3, 2)
○ (2, 2, 3) and (2, 2, 3)
● (2, 3, 2) and (2, 3, 2)
○ (2, 3, 2) and (2, 2, 3)

5. Which of the following is an advantage of putting presentation information in a separate CSS file rather than in HTML itself?

○ The content becomes easy to manage
○ Becomes easy to make site for different devices like mobile by making separate CSS files
○ CSS Files are generally cached and therefore decrease server load and network traffic.
● All of the above

6. What is the correct HTML for inserting an image?

● `<img src="image.gif" alt="MyImage">`
○ `<img href="image.gif" alt="MyImage">`
○ `<image src="image.gif" alt="MyImage">`
○ `<img alt="MyImage">image.gif</img>`

7. Which of following statements is/are False?

1. XML overcomes the limitations in HTML to support a structured way of organizing content.
2. XML specification is not case sensitive while HTML specification is case sensitive.
3. XML supports user defined tags while HTML uses pre-defined tags.
4. XML tags need not be closed while HTML tags must be closed.

○ 2 only
○ 1 only
● 2 and 4 only
○ 3 and 4 only

8. What does CSS stand for?

○ Colorful Style Sheets
● Cascading Style Sheets
○ Creative Style Sheets
○ Computer Style Sheets

9. What is the correct HTML for referring to an external style sheet?

○ `<stylesheet>mystyle.css </stylesheet>`
○ `<style src="mystyle.css">`
● `<link rel="stylesheet" type="text/css" href="mystyle.css">`
○ `<link rel="stylesheet" type="text/css" src="mystyle.css">`

10. Which is the correct CSS syntax?

○ `{body;color:black;}`
○ `body:color=black;`
● `body {color: black;}`
○ `{body:color=black;}`

11. How do you make each character in each word in a sentence have ALL capital letters?

○ You can't do that with CSS
○ text-transform:capitalize
● text-transform:uppercase
○ text-transform:uppercase-first

12. JavaScript is a subset of Java

○ True
● False

13. Which HTML tag are JavaScript scripts written in?

○ `<javascript>`
● `<script>`
○ `<scripting>`
○ `<js>`

14. How do you display a border like this: The top border = 10 pixels, The bottom border = 5 pixels, The left border = 20 pixels, The right border = 1 pixel?

● `border-width:10px 1px 5px 20px;`
○ `border-width:10px 5px 20px 1px;`
○ `border-width:10px 20px 5px 1px;`
○ `border-width:5px 20px 10px 1px;`

15. When writing CSS, how do you select an element with **id** "demo"?

○ demo
○ .demo
● #demo
○ *demo

16. Where is the correct place to insert an external JavaScript script file?

- ● The `<head>` section
- ○ The `<body>` section
- ○ Inside `<script>` tags
- ○ Both `<head>` and `<body>` section are correct

17. What is the correct syntax for referring to an external script called "xxx.js"?

- ○ `<script href="xxx.js">`
- ○ `<script name="xxx.js">`
- ● `<script type="xxx.js">`
- ○ `<script src="xxx.js">`

18. How do you write "alert" in an alert box?

- ○ `alert("\alert\");`
- ● alert("alert")
- ○ msg("alert")
- ○ alertBox("alert")

19. How do you write an IF statement in JavaScript?

- ● if (i === 5) { }
- ○ if i == 5 then
- ○ if i = 5 then
- ○ if i = 5

20. How can you add a comment in a JavaScript?

- ○ `<!--This is a comment-->`
- ○ `'This is a comment`
- ● `//This is a comment`
- ○ `' ' ' This is a comment`

21. What is the correct way to write a JavaScript array?

- ● `var colors = ["red", "green", "blue"]`
- ○ `var colors = (1:"red", 2:"green", 3:"blue")`
- ○ `var colors = "red", "green", "blue"`
- ○ `var colors = 1 = ("red"), 2 = ("green"), 3 = ("blue")`

22. What does the following mean? `<=`

- ○ equals less
- ○ less than or greater than
- ● less than or equal to
- ○ None of the above

23. If I concatenate '7' and '10', what will the result be?

- ○ 7&10
- ○ 17
- ○ 170
- ● 710

24. What is the function of `+=` in javascript as seen below?

var A = 1
A +=

- ◯ It adds two objects
- ◯ It concatenates two strings
- ● It increments A by 1
- ◯ It adds two to A

25. How do you reference an array element?

- ● `myStudent[element]`
- ◯ `myStudent(element)`
- ◯ `myStudent:element`
- ◯ `myStudent{element};`

26. What is the name of a program used to type in HTML codes?

- ◯ Browser
- ● Text editor
- ◯ Source
- ◯ Internet Explorer

27. What does MVC stand for?

- ◯ Message, Verbs and Circuit
- ● Model, View and Controller
- ◯ Model, View, and Circuit
- ◯ Message, Verbs and Codes

28. What are the four major components of MVC?

○ Routes, Models, Views and Controllers

○ Routes, Message, Database and Verbs

○ Message, Routes, Controllers and Database

● Database, Models, Controllers and Views

Comments?

Optional comments about the assessment process, challenges, etc.

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