SRM Institute of Science and Technology, Kattankulathur, Chennai - 603203

Department of Computing Technologies

18CSC207J – Advanced Programming Practice

Cycle Test 1

Answer Key

Part – A

SET – D

1. Give 1 mark who ever attempted.
2. b.False
3. b. [0,4,6]
4. a. Error
5. c.5

Part – B

6. Value Error: too many values to unpack (expected 2)
   ```
   for (k,v), (k2,v2) in zip(d.items(), d2.items()):
      print k, v
      print k2, v2
   ```
7. Answer:
   Constructor of parent and child differs in arguments, also display method has not been implemented.
   ```
   def __init__(self,reg,name,branch):
       super(CSEStudent,self).__init__(reg,name)
       self._branch=branch
     def disp(self):
       print("Reg no ",self.regno," Name = ",self.name," Branch =",self._branch)
   ```
8. Answer:
   ```
   sample_list1 = ['Green','Blue','Blue','Green','Red']
   def countOccurrence(a):
    k = {}
    for j in a:
     if j in k:
       k[j] +=1
     else:
       k[j] =1
    return k

   print(countOccurrence(sample_list1))

   sample_list2 = ['Green','Blue','Blue','Green','Red']
   ```

9. Destructors are called when an object gets destroyed. In Python, destructors are not needed as much as in C++ because Python has a garbage collector that handles memory management automatically.
   The **__del__()** method is a known as a destructor method in Python. It is called when all references to the object have been deleted i.e when an object is garbage collected.

Ex:

```
class Employee:

    def __init__(self):
        print('Employee created.')
    def __del__(self):
        print('Destructor called, Employee deleted.')

obj = Employee()
del obj
```

10. If function call starts with default arguments, then the following arguments must be default only.

```
def student(firstname, lastname ='Mark', standard):
        print(firstname, lastname, 'studies in', standard, 'Standard')
```

Consider the above function student where the second parameter is default one and if invoke the function with the following call with firstname as ‘xyz’ and the standard as ‘X’. But the interpreter will assign the second parameter to lastname, hence the standard left with no value. So parameter follows default must be default parameter.

```
student(‘xyz’,’X’)
```

Part – C

11. A (i) Keyword Argument:
Keyword arguments (or named arguments) are **values that, when passed into a function, are identifiable by specific parameter names**. A keyword argument is preceded by a parameter and the assignment operator, = . Keyword arguments can be likened to dictionaries in that they map a value to a keyword.

11(ii) Answer:

```
def prime_numbers(n):
    primes = []
    for i in range(2, n + 1):
        for j in range(2, int(i ** 0.5) + 1):
            if i%j == 0:
                break
        else:
            primes.append(i)
    return primes
prime_list = prime_numbers(50)
print(prime_list)
```

11.b Answer:

```
def read_input():
    n = int(input())
    s = list(map(int, input().split()))
```

```
    d, m = map(int, input().split())
    res = check_validSquare(n,s,d,m)
    print(res)

def check_validSquare(n,s,d,m):
    ans = 0
    for i in range(n-m+1):
        if (sum(s[i:i+m]) == d):
            ans += 1
    return ans
read_input()
```