SRM Institute of Science and Technology
College of Engineering and Technology
School of Computing
Department of Computing Technologies
SRM Nagar, Kattankulathur – 603203, Chengalpattu District, Tamilnadu
Academic Year: 2022-23 (EVEN)

SET A

Test: CLA-T1 **Date: 15-02-2023**
Course Code & Title:18CSE207J advanced programming practice **Duration:** 1Hour.
Year & Sem: II Year / IV Sem **Max. Marks:** 25

Course Articulation Matrix:

S.No.	Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
1	CO1	H		H		H							

Part - A
(5 x 1 = 5 Marks)
Instructions: Answer all

Q. No	Question	Marks	BL	CO	PO	P.I
1	What is the output for below code str1="APP CT1 TEST" print (str1[2:8]) a. ERROR b. P CT1 c. P CT1 TE d. PP CT1 T	1	1	1	1	1.3.1
2	Which of the below one is match with the post increment operator in python a. i+=1 b. i++ c. i+1 d . i=1+i	1	2	1	1	1.1.1
3	Which of the following will give "Arjun" as output? str1="John,Arjun,Aryan" a.print(str1[-7:-12]) b. print(str1[-11:-7]) c. print(str1[-11:-6]) d. print(str1[-7:-11])	1	2	1	1	1.1.1
4	Which of the below language is not supported by bottom-up approach a. Java b. Python c. C d. C++	1	1	1	1	1.1.1
5	What is the output for below code print (4+5/(7/8)*9) a.55.42 b.92.57 c.4.63 d. error	1	1	1	1	1.3.1
	Part – B **(5 x 2 = 10 Marks)** **Instructions: Answer all Five Questions**					
6	output of this program 2,4,6,8,10,20 1)Find the input for this program 2)Correct the error in this program (-> specifies the indentation of the program) a=int(input("enter the number")) k=0 for x in range(0,a,2)	2	1	1	1	1.1.1

	-> k+=x
	->-> if x%2==0
	->->-> print(x+2)
	->-> else
	->->->print(x)
	print(k)
	
	<u>answer</u>
	a) input to this program = 10
	
	a=int(input("enter the number"))
	k=0
	for x in range(0,a,2):
	k+=x
	if k%2==0:
	print(x+2)
	else:
	print(x)					

7	Write a Python program to sort a list of tuples using Lambda. Original list of tuples: [('English', 88), ('Science', 90), ('Maths', 97), ('Social sciences', 82)] Sorting the List of Tuples: [('Social sciences', 82), ('English', 88), ('Science', 90), ('Maths', 97)] <u>Answer</u> subject_marks = [('English', 88), ('Science', 90), ('Maths', 97), ('Social sciences', 82)] print("Original list of tuples:") print(subject_marks) subject_marks.sort(key = lambda x: x[1]) print("\nSorting the List of Tuples:") print(subject_marks)	**2**	**2**	**1**	**1**	**1.1.1**
8	What is len function and explain how it is used on strings with an example. <u>Answer</u> we can find the total number of characters in a string using the Python len() Function. You can use the len() to get the length of the given string, array, list, tuple, dictionary, etc.	**2**	**1**	**1**	**1**	**1.3.1**

example:

```
languages = ['Python', 'Java', 'JavaScript']

# compute the length of languages

length = len(languages)

print(length)
```

9	Create the example for parametrized constructor and destructor
	
	Example for parametrized constructor
	
	`class DemoClass:`
	`  num = 101`
	
	`  # parameterized constructor`
	`  def __init__(self, data):`
	`  self.num = data`
	`  # a method`
	`  def read_number(self):`
	`  print(self.num)`
	`# creating object of the class`
	`# this will invoke parameterized constructor`
	`obj = DemoClass(55)`
	`# calling the instance method using the object obj`
	`obj.read_number()`
	`# creating another object of the class`
	`obj2 = DemoClass(66)`
	`# calling the instance method using the object obj`
	`obj2.read_number()`
	
	Destructor example
	
	`class Animals:`
	`  #  we will initialize the class`
	`  def __init__(self):`
	`  print('The class called Animals is CREATED.')`
	`  # now, we will Call the destructor`
	`  def __del__(self):`
	`  print('The destructor is called for deleting the A`
	`nimals.')`
	`object = Animals()`
	`del object`
		2	**1**	**1**	**1**	**1.3.1**

10	Difference between the normal function and lambda function. A lambda function is an anonymous function (i.e., defined without a name) that can take any number of arguments but, unlike normal functions, evaluates and returns only one expression .The anatomy of a lambda function includes three elements: • The keyword lambda — an analog of def in normal functions • The parameters — support passing positional and keyword arguments, just like normal functions • The body — the expression for given parameters being evaluated with the lambda function	**2**	**1**	**1**	**1**	**1.3.1**
	Part – C **(1 x 10 = 10 Marks)** **Instructions: Answer for two questions**					
11 a	(i)What is the sequence datatype in python? (2) Sequence Data Types are used to store data in containers in the Python computer language. The different types of containers used to store the data are List, Tuple, and String.	**10**	**1**	**1**	**1**	**1.3.1**

11b	(ii)Create the class with named as food_menu and another class name as food_price. Food list and price information's are retrieved from the functions inside the class from the user at runtime. the outcome of this program is when the particular food is chosen then the appropriate food prices information also need to be print. If the choose food item is not available in the restaurants, then it will print "NA" statement. (8)
	menu1=[]
	menu2=[]
	class food_menu:
	def function1():
	f1=int(input("enter the number of food"))
	for i in range(0,f1):
	x=input("enter the food name")
	menu1.append(x)
	
	class food_price(food_menu):
	def function2():
	f2=int(input("enter no of price for the food"))
	for i in range(0,f2):
	y=int(input("enter the price"))
	menu2.append(y)
	obj1=food_price
	obj1.function1()
	obj1.function2()
	print("display the all the information")
	for (a, b) in zip(menu1, menu2):
	print (a,b)
		10	**1**	**1**	**1**	**1.3.1**

```
s=input("enter the food item to be searched")
for x in menu1:
    if s==x:
        print("yes")
    else:
        print("NA")
```

(OR)

(i)What is the use of super function? give the syntax for super function.

Syntax

super(). __init__()

The super function in Python is used to access methods of the immediate parent class.

(ii)Write a Python function that gives the first 5 rows of Pascal's triangle. (8)

```
                1
              1   1
            1   2   1
          1   3   3   1
        1   4   6   4   1
      1   5   10  10  5   1
    1   6   15  20  15  6   1
1   7   21  35  35  21  7   1
```

```
def pascal_triangle(n):
    trow = [1]
    y = [0]
    for x in range(max(n,0)):
        print(trow)
        trow=[l+r for l,r in zip(trow+y, y+trow)]
    return n>=1
pascal_triangle(6)
```

Course Outcome (CO) and Bloom's level (BL) Coverage in Questions