Started on Wednesday, 14 August 2024, 11:19 AM
State Finished

Completed on Wednesday, 14 August 2024, 12:32 PM

Time taken 1 hour 13 mins

Grade 80.00 out of 100.00

Question 1

Correct

Mark 20.00 out of 20.00

# Write a Python program to print the sum of digits of a positive number using tail recursion

### For example:

Input	Result
1675	19

#### **Answer:** (penalty regime: 0 %)

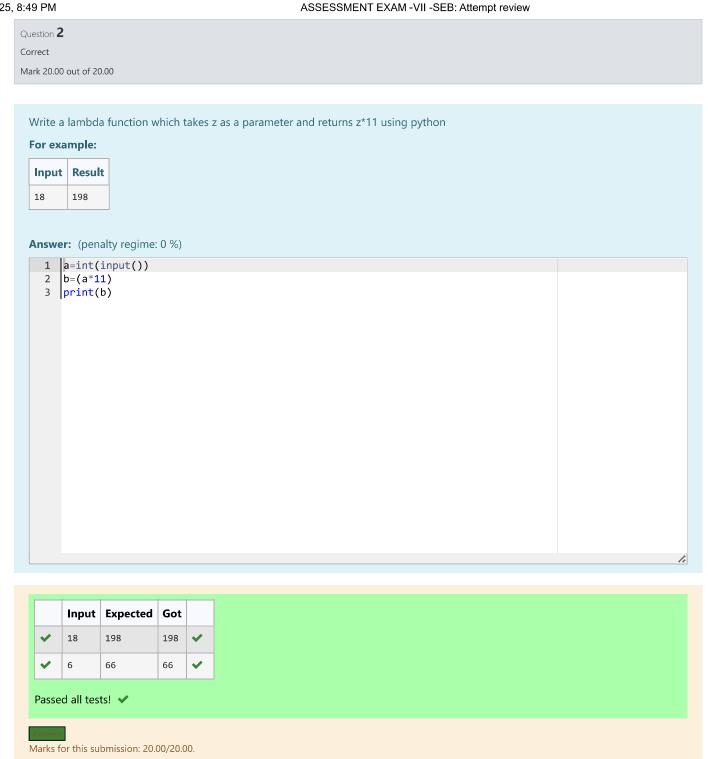
```
1 def sum_digits(num):
2 🔻
       if num<0 or int(num) !=num:</pre>
           return "Not defined"
3
4 🔻
       elif num==0:
5
           return 0
6 🔻
       else:
7
           return(num%10)+sum_digits(num//10)
8
  num=int(input())
  print(sum_digits(num))
```

	Input	Expected	Got	
~	1675	19	19	~
<b>✓</b> 453	453	12	12	~
~	-13	Not defined	Not defined	~

Passed all tests! 🗸

Correct

Marks for this submission: 20.00/20.00.



Question **3**Incorrect
Mark 0.00 out of 20.00

# Write a program to count the consonants in a string using recursion

# For example:

Input	Result	
tree	2	

Answer: (penalty regime: 0 %)

	Answer: (penaity regime: 0 %)					
1	<pre>a=input() b="2" print(b)</pre>					
2	b="2"					
3	<pre>print(b)</pre>					

	Input	Expected	Got	
~	tree	2	2	~
~	four	2	2	~

Your code failed one or more hidden tests.

Your code must pass all tests to earn any marks. Try again.

Incorrec

Marks for this submission: 0.00/20.00.

Question 4
Correct
Mark 20.00 out of 20.00

### Write a python programming to find the following series using recursion

$$\sum_{0}^{n} \frac{(-1)^{k} x^{2k+1}}{2k+1}$$

### For example:

In	put	Result
0.	8	0.6720140684892352
5		

# **Answer:** (penalty regime: 0 %)

```
1 def fact(i):
        if i==0 or i==1:
2 🔻
3
           return 1
4
        else:
5
            return i*fact(i-1)
6 def taninv(x,n):
7 🔻
        if n==0:
8
            return x
9 ,
        else:
10
            return pow(-1,n)*pow(x,(2*n+1))/(2*n+1)+taninv(x,n-1)
11
   x=float(input())
12
   n=int(input())
   print(taninv(x,n))
13
```

	Input	Expected	Got	
~	0.8 5	0.6720140684892352	0.6720140684892352	~
~	0.4 4	0.3805097366349207	0.3805097366349207	~

Passed all tests! 🗸

Marks for this submission: 20.00/20.00.

Question **5**Correct
Mark 20.00 out of 20.00

Write a Python Program to evaluate the series:

1/1!+1/2!+1/3!+....+1/n! using recursion.

# For example:

Input	Result
4	1.7083333333333335

### **Answer:** (penalty regime: 0 %)

```
1 v def factorial(n):
 2 🔻
        if(n==0):
 3
            return 1
 4
        return(n*factorial(n-1))
 5
    Limit=int(input())
 6
 7
    sum=<mark>0</mark>
 8 v for i in range(1,Limit+1):
 9
        sum=sum+(1/factorial(i))
10 print(sum)
```

	Input	Expected	Got	
~	4	1.708333333333333	1.708333333333333	<b>~</b>
~	7	1.7182539682539684	1.7182539682539684	~
~	10	1.7182818011463847	1.7182818011463847	~

Passed all tests! 🗸

Marks for this submission: 20.00/20.00.