



Time: 3 Hrs.

Answer All Questions

Max Marks: 100

1	a	Indicate the output or reason for error if any. <code>print("text")</code> <code>print("25" / "5" )</code> <code>a = 10; b = 0; print(str(a) * b)</code> <code>a = 10; b = 10; print(a == b)</code> <code>a = 10; print(++a)</code>	5
	b	Find the output in each case. <code>x = 100; y = x; y = 200; print(x)</code> <code>x = [100, 200]; y = x; y = [300, 400]; print(x)</code> <code>x = [100, 200]; y = x; y.extend([300, 400]); print(x)</code> <code>x = [100, [200]]; y = x; y[0] = [300, 400]; print(x)</code> <code>x = [100, 200]; y = x; y += [300, 400]; print(x)</code>	5
	c	Evaluate these expressions. <code>5 == 5 == 5</code> <code>(2 + 3, 3 + 2) * 2</code> <code>2 * "25"</code> True and True or not True <code>5 in range(5)</code>	5
	d	Find the type of the following expressions if the expression is valid. Otherwise indicate the error. <code>(-25) ** 0.5</code> <code>"pes"[1]</code> <code>{"x" : 25, 25 : "y"}[25] == 'x'</code> <code>{}</code> <code>set({})</code>	5
2	a	<code>n = int(input("enter a number:"))</code> <code>s = 0</code> <code>while n :</code> <code>if n % 2 :</code> <code>s += 1</code> <code>n &gt;= 1</code> <code>print(s)</code> Find the output for the following inputs i) 25 ii) 15 What does the program do?	5
	b	Write a program to find the biggest number in the geometric progression with start value a and common ratio r less than a given number n. Inputs are a, r and n. Hint: geometric progression has the terms a, ar, ar <sup>2</sup> ar <sup>3</sup> ..	5

	c	<pre> n = int(input("enter a number:")) i = 2 while n &gt; 1 :     while n % i == 0 :         print(i, end = " ")         n //= i     i += 1 print()  Find the output for the following inputs. i) 54 ii) 24 What does the program do? </pre>	5
	d	<p>Write a program to generate the following pattern for a given value of n.</p> <p>If n = 4, then the expected output is:</p> <pre> 4 4 4 4 4 3 3 3 4 3 2 2 4 3 2 1 </pre>	5
3	a	<p>Find the output.</p> <pre> a = [] for i in range(4):     a.append([])     for j in range(i + 1):         a[i].append(j * j) print(a) </pre>	4
	b	<p>Write a program segment to achieve the following.</p> <p>Create a dictionary of lists given two lists.</p> <p>Input:</p> <pre> a = ['karnataka', 'tamilnad', 'karnataka', 'karnataka', 'tamilnad', 'kerala'] b = ['mysore', 'chennai', 'hassan', 'shimoga', 'madurai', 'trivandrum'] </pre> <p>output:</p> <pre> d = {     'karnataka' : ['mysore', 'hassan', 'shimoga' ],     'tamilnad'   : ['chennai', 'madurai'],     'kerala'    : ['trivandrum' ] } </pre>	5
	c	<p>Find the resultant set. Display the elements.</p> <pre> i) set("1234") ii) set(("1234")) iii) set(("12", "34")) iv) set(set("1234")) v) set("12" + "34") </pre>	5
	d	<p>Write a program to decode ['m', 'i', 's', (2, 1), (1, 1), (2, 3), 'p', (8, 1), (1, 1)] as mississippi.</p> <p>If it is a character, that itself is the decoded form.</p> <p>If it is a tuple, in the decoded string so far, the first is the position and the second is the length of the string.</p>	6

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	File: test.py print('one') import abc print('two : ', __name__)	
b	What is the output with and without the statements marked X? def foo() : try: print("ondu") print(gottilla) print("eradu") except NameError: #X print("mooru") #X except KeyError: print("nalku") print("idu")  print("three") foo() print("aaru")	4
c	If f1 and f2 are file objects opened for reading, what would the following expression give? set(f1) and set(f2)	3
d	i) Find the output. class A: def __iter__(self): self.x = 0 return self def __next__(self): self.x += 1 return self.x  a = A() x = iter(a) y = iter(a) print(next(x)) print(next(y)) print(next(x))  ii) Find the output. def gen(): while True: yield True yield False  g = gen() for i in range(4): print(next(g))	3 + 4