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University Roll No.....

Mid-Term Examination, Even Semester 2021-22

B. Tech. (CSE/ECE/EE), 1st Year, 2nd Semester

Sample Paper 02: BCSG1001 Python Programming

Time: 2 Hours

Maximum Marks: 30

Section- A

Note: Attempt All Five Questions.

3 x 5 = 15 Marks

1. Discuss the function id(), str(), ord() and chr() in python with examples
2. Write the output for the following lines and Describe and explain the use of the function eval() with examples.

```
a = 'first'
b = 'last'
k = 'a' if a is b else 'a' and 'b'
out = eval(k)
print(out, type(out))
```

3. What is the purpose of is, is not, in, not in operators in Python? Write a Python Program to calculate the sum of all the even numbers in a user given list.

Sample input

2 4 5 6 7 8

Sample output

20

4. Name any three list methods that returns any values other than None and explain with suitable example. What is the output of the following program?

```
lst = ['vehicle', 'objects', 'human', 'water']
slc = lst[10:0:-2]
print(slc, type(slc))
```

2+1

5. What is tuple in Python? Explain with example. Write a python program to find the intersection between two tuples.

sample input

(2, 4, 7, 9)

(4, 6, 8, 9)

sample output

(4, 9)

1+2

Section – B

Note: Attempt All Three Questions.

3 x 5 = 15 Marks

1. What is the difference between a python tuple and python list? Explain with suitable examples. Write a Python program to merge the two list into a list of tuples (pair of similar index). (don't use zip() function)

sample input

[2, 6, 8, 9]

[3, 0, 7, 1]

sample output

[(2, 3), (6, 0), (8, 7), (9, 1)]

3+2

2. Explain the different string formats available in Python with examples. Write a python program to find the number of vowels, consonants, digits and white space characters in a string. String is entered by user at runtime.

2+3

3. Illustrate the different types of control flow statements or control flow structure available in Python with examples. Also discuss break and continue keywords with suitable example.

What is the output of the following lines? Brief the error if code having error

y = '10%d0'%True

print(int(y, 2))

2+2+1

or

What are the rules for writing an identifier? Explain with suitable example.

What is difference between mutable and immutable objects in Python? List all the immutable types with example.

What is the output of the code below?

input = 'hello'

hello = None

out = hello or input

print(eval(out))

2+2+1