eDAI Python Programming Module End Examination - March 2022

There are 20 Objective questions(i.e. Multiple Choice Questions) and 7 Descriptive questions(5 short answer type and 2 Long Answer type) in this examination paper. Each objective question carries 01 mark. Each short answer descriptive question carries 02 marks and Long Answer type carries 10 Marks . There is no negative marking for objective questions. Total duration of exam is of 1hour 45 minutes. . After Question No. 40 , click on Next Option to view section of descriptive questions.

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Q1. Is Python case sensitive when dealing with identifiers? 1 point

- (●) yes
- ( ) no
- ( ) machine dependent
- ( ) none of the mentioned

Q2. Why are local variable names beginning with an underscore discouraged? 1 point

- (●) they are used to indicate a private variables of a class
- ( ) they confuse the interpreter
- ( ) they are used to indicate global variables
- ( ) they slow down execution

Q3. Which of the following will run without errors? 1 point

- (●) round(45.8)
- ( ) round(6352.898,2,5)
- ( ) round()
- ( ) round(7463.123,2,1)

Q4. In python we do not specify types, it is directly interpreted by the Interpreter, so consider the following operation to be performed. >>>x = 13 ? 2 objective is to make sure x has a integer value, select all that apply (python 3.xx version) 1 point

- ( ) x = 13 // 2
- ( ) x = int(13 / 2)
- ( ) x = 13 % 2
- (●) All of the mentioned

Q5. What will be the output after the following statements? 1 point

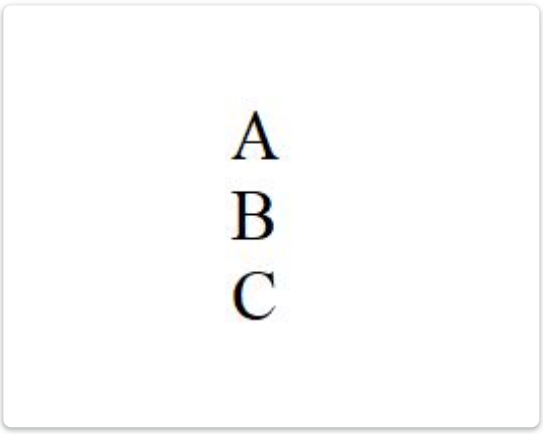
```
m = [-5, -2, 0, 3, 4]
print([n*2 for n in m])
```

- [-10, -4, 0, 6, 8]
- [10, 4, 0, 6, 8]
- [-10, -4, 0, 6] (selected)
- [-10, -4, 0]

Q6. What will be the following code output? 1 point

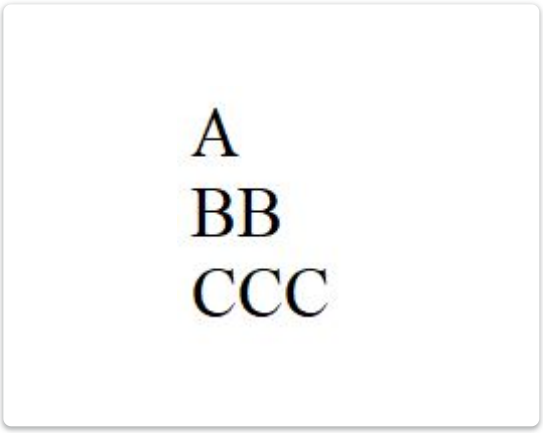
```
s = 'ABC'
n = 1
for c in s:
    print(c * n,end=" ")
    n += 1
```

A B C



Option 1

A BB CCC



Option 3

Q7. What is the following function inserts an object at given index in a list? 1 point

- list.index(obj)
- list.insert(index, obj)
- list.pop(obj=list[-1])
- list.remove(obj)

Q8. What will be the output of the following Python code? 1 point

```
def find(a, **b):
    print(type(b))
find('letters',A='1',B='2')
```

- String
- Tuple
- Dictionary
- An exception is thrown

Q9. What does the function re.match do? 1 point

- matches a pattern at the start of the string
- matches a pattern at any position in the string
- such a function does not exist
- none of the mentioned

Q10. To read the entire remaining contents of the file as a string from a file object infile, we use _____ 1 point

- infile.read(2)
- infile.read()
- infile.readline()
- infile.readlines()

Q11. Which of the following best describes inheritance? 1 point

- Ability of a class to derive members of another class as a part of its own definition
- Means of bundling instance variables and methods in order to restrict access to certain class members
- Focuses on variables and passing of variables to functions
- Allows for implementation of elegant software that is well designed and easily modified

Q12. Which of the following statements is wrong about inheritance? 1 point

- Protected members of a class can be inherited
- The inheriting class is called a subclass
- Private members of a class can be inherited and accessed
- Inheritance is one of the features of OOP

Q13. What will be the output of the following Python code? 1 point

```
class A:
    def __str__(self):
        return '1'
class B(A):
    def __init__(self):
        super().__init__()
class C(B):
    def __init__(self):
        super().__init__()
def main():
    obj1 = B()
    obj2 = A()
    obj3 = C()
    print(obj1, obj2,obj3)
main()
```

- (●) 1 1 1
- ( ) 1 2 3
- ( ) '1' '1' '1'
- ( ) An exception is thrown

Q14. Which of these is not a fundamental features of OOP? 1 point

- ○ Encapsulation
- ○ Inheritance
- ◉ Instantiation
- ○ Polymorphism

Q15. How many except statements can a try-except block have? 1 point

- ○ zero
- ○ one
- ○ more than one
- ◉ more than zero

Q16. What happens if the file is not found in the following Python code? 1 point

```
a=False
while not a:
    try:
        f_n = input("Enter file name")
        i_f = open(f_n, 'r')
    except:
        print("Input file not found")
```

- (●) No error
- ( ) Assertion error
- ( ) Input output error
- ( ) Name error

Q17. An exception is _____ 1 point

- (●) an object
- ( ) a special function
- ( ) a standard module
- ( ) a module

Q18. Which of the following functions converts date to corresponding time in Python? 1 point

- ○ strptime()
- ○ strftime()
- ◉ Both of the above
- ○ None of the above

Q19. As what datatype are the *args stored, when passed into a function? 1 point

- ○ List
- ◉ Tuple
- ○ Dictionary
- ○ set

Q20. Which of the following is not a valid set operation in python? 1 point

- ○ Union
- ○ Intersection
- ○ Difference
- ◉ None of the above

Descriptive Examination

Attempt any 2 questions only from Question No. (46 to 48).

Q41: Explain the use of split function? 2 points

split function is to break string a delimited string into substring.we can use

Q42: What is lambda? 2 points

a lambda function is a small anonymous function.A lambda function can take any number of argument ,but can only have one expression

Q43: Define ‘self’ in Python? 2 points

the self keyword is used to represent an instance object of given class.

Q44:Is there any function to change case of all letters in the string? specify name if there is any? 2 points

islower() in ython ,islower ()is a built in method used for string handling

Q45: What are the immutable built-in datatypes available in python ? 2 points

1>integers. 2>floting point numbers. 3>booleans.4>string.5>tuples.

Q46: Write a program to create a version of a palindrome recognizer that also accepts phrase palindromes such as "Go hanga salami I'm a lasagna hog.", "Was it a rat I saw?", "Step on no pets", "Sit on a potato pan, Otis", "LisaBonet ate no basil", "Satan, oscillate my metallic sonatas", "I roamed under it as a tired nude Maori","Rise to vote sir", or the exclamation "Dammit, I'm mad!". Note that punctuation, capitalization, and spacing are usually ignored. 10 points

```
def encrypt(text,s):
    result = ""
    for i in range(len(text)):
        char = text[i]
        if (char.isupper()):
            result += chr((ord(char) + s-65) % 26 + 65)
        else:
            result += chr((ord(char) + s - 97) % 26 + 97)
    return result

text = "ATTACKATONCE"
s = 13
print ("Text  : " + text)
print ("Cipher: " + encrypt(text,s))
```

```
output::  Text  : ATTACKATONCE
          Cipher: NGGNPXNGBAPR
```

Q47: In cryptography, a Caesar cipher is a very simple encryption techniques in which each letter in theplain text is replaced by a letter some fixed number of positions down the alphabet. For example, with ashift of 3, A would be replaced by D, B would become E, and so on. The method is named after JuliusCaesar, who used it to communicate with his generals. ROT-13 ("rotate by 13 places") is a widely usedexample of a Caesar cipher where the shift is 13. In Python, the key for ROT-13 may be represented bymeans of the following dictionary:key = {'a':'n', 'b':'o', 'c':'p', 'd':'q', 'e':'r', 'f':'s', 'g':'t', 'h':'u', 'i':'v', 'j':'w', 'k':'x', 'l':'y', 'm':'z', 'n':'a', 'o':'b','p':'c', 'q':'d', 'r':'e', 's':'f', 't':'g', 'u':'h', 'v':'i', 'w':'j', 'x':'k', 'y':'l', 'z':'m', 'A':'N', 'B':'O', 'C':'P', 'D':'Q', 'E':'R','F':'S', 'G':'T', 'H':'U', 'I':'V', 'J':'W', 'K':'X', 'L':'Y', 'M':'Z', 'N':'A', 'O':'B', 'P':'C', 'Q':'D', 'R':'E', 'S':'F', 'T':'G','U':'H', 'V':'I', 'W':'J', 'X':'K', 'Y':'L', 'Z':'M'}Your task in this exercise is to implement an encoder/decoder of ROT-13. Once you're done, you will beable to read the following secret message:Pnrfne pvcure? V zhpu cersre Pnrfne fnynq!Note that since English has 26 characters, your ROT-13 program will be able to both encode and decodetexts written in English.

10 points

Q48: Given a dictionary of students and their favorite colors: 10 points

```
people={'Arham':'Blue','Lisa':'Yellow',''Vinod:'Purple','Jenny':'Pink'}
```

1. Find out how many students are in the list
2. Change Lisa's favorite color
3. Remove 'Jenny' and her favorite color
4. Sort and print students and their favorite colours alphabetically by name

```
people={'Arhan':'blue','lisa':'yellow','vinod':'purple','jenny':'pink'}
favcolor=input("input new favorite of lisa")
people['lisa']=favcolor
keylist=[]
list1=[]
list1.extend(people)
list1.sort()
for key in list1:
   print(key,':',people[key])
```

---

output:
input new favorite of lisared
Arhan : blue
jenny : pink
lisa : red
vinod : purple