

Dayananda Sagar College of Engineering
Department of Electronics & Communication Engg.
Continuous Internal Evaluation – III

Course Name : Programming in Python	Date :	06/01/2021
Course Code : 18EC5DEBPP	Day :	Wednesday
Semester : 5	Timings :	1PM
Max Marks : 50 M	Duration :	1½ Hrs.

Q. No	Question Description								Marks	CO & Levels	
1	(a)	Which of the following is incorrect with respect to OOP concept in Python?								1	
	i)	Classes are real world entities while objects are not real.	ii)	Objects are real world entities while classes are not real.	iii)	The concept of OOP in Python focuses on creating reusable code	iv)	OOP makes the program easy to understand as well as efficient			
	(b)	Which of the following is true for a class?								1	
	i)	Blueprint of an object	ii)	Instance of an object	iii)	Only i) is correct	iv)	Both i) and ii)are correct			
	(c)	If same message is passed to objects of several different classes and all of those can respond in a different way, what is this feature called?								1	
	i)	Inheritance	ii)	Overloading	iii)	Polymorphism	iv)	Overriding			
	(d)	Encapsulation provides data security is _____								1	
	i)	Not ensured	ii)	Ensured to some extent	iii)	Purely ensured	iv)	Very low			
	(e)	Class is _____ abstraction.								1	
	i)	Object	ii)	Logical	iii)	Real	iv)	Hypothetical			
	(f)	Which of the following is correct with respect to Lambda functions in Python?								1	
	i)	Lambda functions always make code easier to read.	ii)	Lambda functions are used for functional programming.	iii)	Both i) & ii) correct	iv)	Both i) & ii) wrong			
	(g)	Which of the following statement is True?								1	
	i)	ndarray is also known as the axis array.	ii)	In Numpy, dimensions are called axes	iii)	Both i) & ii) correct	iv)	Both i) & ii) wrong			
	(h)	NumPy is often used along with packages like?								1	
	i)	Node.js	ii)	Matplotlib	iii)	Lambda	iv)	All of these			
	(i)	import numpy as np arry = np.array([1, 2, 3], dtype = complex) print (arry)								1	
	i)	[1,2,3]	ii)	[[1.+0.j, 2.+0.j, 3.+0.j]]	iii)	[1.+0.j, 2.+0.j, 3.+0.j]	iv)	Error			
	(j)	In pandas, Index values must be?								1	
	i)	unique	ii)	hashable	iii)	Both i) & ii)	iv)	None of the above			

NOTE: In programs writing comments beside each operation is compulsory. Show the necessary inputs and outputs along with program

2	a)	Differentiates between Method and Construct with an examples	04	
	b)	Describe the need for __init__() constructor method with example	02	
	c)	Program to Demonstrate the Difference between Abstraction and Encapsulation	04	
3	a)	Elaborate Lambda(), filter() function, map() function and reduce() function and write single program to describe these functions.	10	
4	a)	Write Python Program to describe the difference between Class Variables and Instance Variables.	04	
	b)	Write Python Program to Calculate Area and Perimeter of different Shapes using Polymorphism.	06	
OR				

5	a)	Consider a Rectangle Class and Create Two Rectangle Objects. Write Python program to Check Whether the Area of the First Rectangle is Greater than Second by Overloading > Operator.	05	
	b)	Program to Demonstrate Multiple Inheritance with Method Overriding	05	
6	a)	Write a python program to calculate the difference between the maximum and the minimum values, multiplication and division of those values of a given NumPy array.	06	
	b)	Write a python program to calculate the mean, median, standard deviation of a Numpy array	04	
		OR		
7	a)	Write a python program to display third and sixth elements of a given NumPy array and also print addition and subtraction of the elements.	05	
	b)	Write Python program to add, subtract, multiply and divide two Pandas Series.	05	