

U.S.N.

B.M.S. College of Engineering, Bengaluru-560019

Autonomous Institute Affiliated to VTU

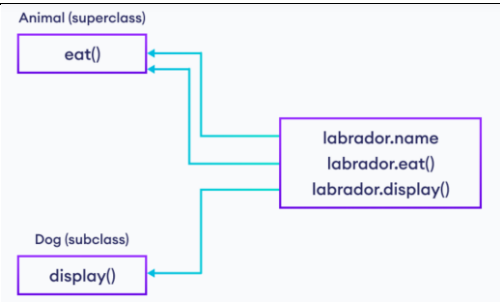
April 2025 Semester End Make-Up Examinations**Programme: B.E.****Branch: Common to all Branches****Course Code: 22CS1ESPYP****Course: Introduction to Python Programming****Semester: I****Duration: 3 hrs.****Max Marks: 100**

Instructions: 1. Answer any FIVE full questions, choosing one full question from each unit.
2. Missing data, if any, may be suitably assumed.

Important Note: Completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages. Revealing of identification, appeal to evaluator will be treated as malpractice.			UNIT - I	CO	PO	Marks
	1	a)	Identify the valid and invalid variables in the following. a)22_abc b) abc_23 c) while d) str_sub e) num1 f)elif	CO1	PO1	6
		b)	Examine the output of the code segment given below. a= "hi" b= a+5; print(b)	CO2	PO2	4
		c)	Design and develop python programs to, i) check the given number is odd or not ii) find factorial of a given number	CO3	PO3	10
			OR			
	2	a)	Analyze the python code, show the iterations and write the output. n = 5 k = 5 for i in range(0,n+1): for j in range(k-i,0,-1): print(j,end=' ') print()	CO1	PO1	6
		b)	Examine the output of the code segment given below. for i in range(1,10): if(i==3): break print(i)	CO2	PO2	4

		c)	Write a program to: i) Print all the divisors of a given integer number ii) Print the greatest of three integer number	CO3	PO3	10
			UNIT - II			
3	a)		Explain List and its operations with example.	CO1	PO1	6
	b)		Write a Program that takes a list as input and makes new list with only even elements	CO3	PO3	10
	c)		Predict the output of the following code and justify the same. test_str = "abbbccddbbbc" print ("The original string is : " + test_str) all_freq = {} for i in test_str: if i in all_freq: all_freq[i] += 1 else: all_freq[i] = 1 res = max(all_freq, key = all_freq.get) print (str(res))	CO2	PO2	4
			OR			
4	a)		List and explain any three string methods in python	CO1	PO1	6
	b)		Write a Program in python to check the given string is binary string or not. (Ex: 1001 is binary , 10rt is not a binary string)	CO3	PO3	10
	c)		s = "Rayray" v = 'aeiou' if all(I in s.lower() for I in v): print("True") else: print("False") Predict the output of above code snippet.	CO2	PO2	4
			UNIT - III			
5	a)		Explain dictionary and its operations with an example.	CO1	PO1	6
	b)		Write a Python program to store phone numbers of persons in a dictionary and display the phone number of the requested person.	CO3	PO3	8
	c)		Predict the output of the following code and justify the same. def repl(s, ch): new_str = []	CO2	PO2	6

		<pre> l = len(s) for i in range(len(s)): if (s[i] == ch and i != (l-1) and i != 0 and s[i + 1] != ch and s[i-1] != ch): new_str.append(s[i]) elif s[i] == ch: if ((i != (l-1) and s[i + 1] == ch) and (i != 0 and s[i-1] != ch)): new_str.append(s[i]) else: new_str.append(s[i]) return ''.join(i for i in new_str) s = 'abceedees' char = 'e' print(repl(s, char)) </pre>			
		OR			
6	a)	Define tuple. How do you create a single element in a tuple? Write a python program to find the common elements between two tuples.	CO1	PO1	6
	b)	Develop a python program to count occurrence of all characters present in a string.	CO3	PO3	8
	c)	Analyse the below code and explain its working: <pre> def fun(number): if number <= 0: return False divisor_sum = 0 for i in range(1, number): if number % i == 0: divisor_sum += i return divisor_sum == number input_number = 28 if fun(input_number): print("True") else: print("False") </pre>	CO2	PO2	6

		UNIT - IV			
7	a)	Explain with an example creation of classes and objects in Python.	CO1	PO1	6
	b)	 Write a python program implement the concept of inheritance as shown in the above diagram	CO3	PO3	8
	c)	<pre> class Bike: name = "" gear = 0 # create object of class bike1 = Bike() # access attributes and assign new values bike1.gear = 11 bike1.name = "Mountain Bike" print(f"Name: {bike1.name}, Gears: {bike1.gear} ") </pre> Predict the output of the code segment and justify your answer.	CO2	PO2	6
		OR			
8	a)	Explain with an example the creation of many instances in python	CO1	PO1	6
	b)	Write a python program to illustrate the concept of inheritance.	CO3	PO3	8
	c)	<pre> class Point: def __init__(self, x = 0, y = 0): self.x = x self.y = y def add_points(self, other): x = self.x + other.x y = self.y + other.y return Point(x, y) p1 = Point(1, 2) p2 = Point(2, 3) p3 = p1.add_points(p2) print((p3.x, p3.y)) </pre> Predict the output of the above code snippet and justify.	CO2	PO2	6

			UNIT - V			
	9	a)	Explain the different file operations with an example.	CO1	PO1	6
		b)	Write a python program to: i) Extract Email IDs from a given text. ii) Validate the user password with minimum length=6 and maximum length=16 and must have at least one lower-case letter, upper-case letter, number and special symbol (#, @, \$, _).	CO3	PO3	10
		c)	import re x = 'We just received \$10.00 for cookies.' y = re.findall('\\$[0-9.]+',x) print(y) Predict the output of the above code	CO2	PO2	4
			OR			
	10	a)	Explain search method in the context of regular expressions.	CO1	PO1	6
		b)	Develop a python program to copy the contents of only odd lines from one file to another file.	CO3	PO3	10
		c)	import re txt = "8 times before 11:45 AM" #A to Z upper case: x = re.findall("[a-zA-Z]", txt) print(x) Predict the output of the above code and justify.	CO2	PO2	4
