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

Autonomous Institute Affiliated to VTU

October 2024 Supplementary Examinations

Programme: B.E.

Branch: Common to all Branches

Course Code: 22CS1ESPYP / 22CS2ESPYP

Course: Introduction to Python Programming

Semester: I / II

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.
 3. Write expected output for all programs

UNIT - I			CO	PO	Marks
1	a)	Build a python code to demonstrate the working of a simple calculator with suitable output.	CO3	PO3	6
	b)	Analyze the below code, trace each iteration of “while” loop with relevant explanation along with the final output. $i = 0$ $while i < 5:$ $ print(i)$ $ i += 1$ $ if i == 3:$ $ break$ $ else:$ $ print(0)$	CO2	PO2	6
	c)	Define operator and operand. List all Arithmetic, Comparison and Logical operators used in Python with example	CO1	PO1	8
UNIT - II					
2	a)	Illustrate the following string methods with a relevant example i) len() ii) capitalize() iii) upper() iv) strip()	CO1	PO1	4
	b)	Develop a python program that inputs list elements from user and makes a new list that has only the even elements of this list in it.	CO3	PO3	6
	c)	Develop a Python Program to input a string to check whether it is a Palindrome string or not.	CO3	PO3	6
	d)	$a=['hello', 'how', [1,2,3], [[10,20,30]]]$ Analyze the above statement and predict the output for following commands (i) $print(a[::])$ (ii) $print(a[-3][0])$ (iii) $print(a[2][:-1])$ (iv) $print(a[0][:: -1])$	CO2	PO2	4

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 – III					
3	a)	Summarize functions in python with syntax for function definition and a relevant example.	<i>CO1</i>	<i>PO1</i>	8
	b)	Develop a python code to count the number of characters in the string and store them in a dictionary data structure.	<i>CO3</i>	<i>PO3</i>	6
	c)	Illustrate the difference between lists, tuples and dictionaries.	<i>CO1</i>	<i>PO1</i>	6
OR					
4	a)	Elucidate tuple by demonstrating the creation of a single element in a tuple and develop a python program to find the common elements between two tuples.	<i>CO1,3</i>	<i>PO1,3</i>	7
	b)	Analyze the below code which demonstrates user defined function to interchange first and last elements in a list. Complete the code by filling in the missing values marked as “?” and explain the code along with the expected output. <pre># Swap function ? swapList(List1): size = ?(List1) # Swapping temp = List1[?] List1[?] = List1[?] List1[?] = temp return List1 list1=[1,2,3,4,5] list2=swapList(?) print(list?)</pre>	<i>CO2</i>	<i>PO2</i>	6
	c)	Develop a program that combines two lists into a dictionary without using builtin function “zip”.	<i>CO3</i>	<i>PO3</i>	7
UNIT - IV					
5	a)	Create a class Employee to have the following: <ul style="list-style-type: none"> Variables; emp_id, designation A constructor to initialize these values A method salary_calc that accepts basic salary as parameter, adds 10000 if designation is “clerk” and adds 12000 if designation is “Manager”. Create 2 objects and call the appropriate method.	<i>CO3</i>	<i>PO3</i>	10
	b)	Demonstrate “try” and “except” which checks for user defined exception call with suitable example	<i>CO1</i>	<i>PO1</i>	10
OR					
6	a)	Demonstrate the following with supporting code snippets i) class ii) objects iii) inheritance	<i>CO1</i>	<i>PO1</i>	9
	b)	Develop a python code to demonstrate “ValueError” exception and “ZeroDivisionError” exception with all possible outputs	<i>CO3</i>	<i>PO3</i>	5
	c)	Summarize the concept of constructor object lifecycle in Python with relevant example	<i>CO1</i>	<i>PO1</i>	6

UNIT - V					
	7	a)	Elucidate regular expressions and list any five Meta-characters or wild card characters used in regular expressions with supporting examples.	<i>CO1</i>	<i>PO1</i>
		b)	Develop a program to compute the number of characters, words and lines in a file.	<i>CO3</i>	<i>PO3</i>

SUPPLEMENTARY EXAMS 2024