

PYTHON PROGRAMMING

(Model Question Paper – I)

Time: 3 Hours]

[Maximum Marks: 100

Instructions to students:

Answer FIVE FULL questions

Q.No.		Questions	Marks	CO	RBT Cognitive Level
1.	a)	Describe Arithmetic Operators, Assignment Operators, Comparison Operators, Logical Operators and Bitwise Operators in detail with examples.	10	CO1	L2
	b)	Explain the Identifiers, Keywords, Statements, Expressions, and Variables in Python programming language with examples.	5	CO1	L2
	c)	Explain the basic data types available in Python with examples.	5	CO1	L2
OR					
2.	a)	Write Python Program to reverse a number and also find the Sum of digits in the reversed number. Prompt the user for input.	8	CO1	L3
	b)	Write Pythonic code to check if a given year is a leap year or not.	6	CO1	L3
	c)	Write Python program to find the GCD of two positive numbers.	6	CO1	L3
3.	a)	Write Python code to determine whether the given string is a Palindrome or not using slicing.	6	CO2	L3
	b)	Explain the use of join() and split() string methods with examples. Describe why strings are immutable with an example.	6	CO2	L2
	c)	Write Python program to count the total number of vowels, consonants and blanks in a String.	8	CO2	L3
OR					
4.	a)	Write Python program to add two matrices and also find the transpose of the resultant matrix.	7	CO3	L3
	b)	Input five integers (+ve and -ve). Write Pythonic code to find the sum of negative numbers, positive numbers and print them. Also, find the average of all the numbers and numbers above average.	7	CO3	L3

	c)	Write Pythonic code to find Mean, Variance and Standard Deviation for a list of numbers.	6	CO3	L3
5.	a)	Discuss the relation between tuples and lists, tuples and dictionaries in detail.	8	CO3	L2
	b)	Write Python program to swap two numbers without using Intermediate/Temporary variables. Prompt the user for input.	6	CO3	L3
	c)	Write a program that accepts a sentence and calculate the number of digits, uppercase and lowercase letters.	6	CO3	L3
OR					
6.	a)	Write Pythonic code to sort a sequence of names according to their alphabetical order without using sort() function.	8	CO3	L3
	b)	Discuss zip() function with an example.	6	CO3	L2
	c)	Illustrate the following Set methods with an example. a) intersection() b) union() c) issubset() d) difference() e) update() f) discard()	6	CO3	L2
7.	a)	Discuss the following special characters in detail. a) \d b) \w c) \b d) {m, n} e) \ f) ?	7	CO4	L2
	b)	Consider the file structure given below. Write Python program to delete all the files and subdirectories from the Extinct Animals Directory. 	6	CO4	L3
	c)	Describe the difference between Python os and os.path modules. Also, discuss the following methods of os module a) chdir() b) rmdir() c) walk() d) listdir() e) getcwd()	7	CO4	L2
OR					
8.	a)	Describe the characteristics of the CSV format.	7	CO4	L2
	b)	Write Python program to write the data given below to a CSV file. Category, Winner, Film, Year Best Picture, Doug Mitchell and George Miller, Mad Max: Fury Road, 2015 Visual Effects, Richard Stammers, X-Men: Days of Future Past, 2014 Best Picture, Martin Scorsese and Leonardo DiCaprio, The Wolf of Wall Street, 2013 Music (Original Song), Adele Adkins and Paul Epworth, Skyfall from Skyfall, 2012	7	CO4	L3
	c)	Discuss the following methods of os.path module. a) isfile() b) abspath() c) relpath() d) dirname() e) splitext() f) getmtime()	6	CO4	L2
9.	a)	Write Python Program to Calculate Area and Perimeter of	10	CO5	L3

		different Shapes using Polymorphism.			
	b)	Illustrate the diamond problem in Python programming language with an example.	10	CO5	L2
OR					
10.	a)	Write Python Program to Demonstrate the Construction of Method Resolution Order in Python.	10	CO5	L3
	b)	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.	10	CO5	L2
