

STELLA MARIS COLLEGE (AUTONOMOUS) CHENNAI – 600 086
(For candidates admitted from the academic year 2023 – 2024 and thereafter)

M.Sc. DEGREE EXAMINATION, NOVEMBER 2024
INFORMATION TECHNOLOGY

FIRST SEMESTER

COURSE : MAJOR CORE
PAPER : PROGRAMMING WITH PYTHON
SUBJECT CODE : 23CS/PC/PP14
TIME : 1 ½ HOURS **MAX. MARKS: 50**

Q. No.	SECTION A (6 X 5 = 30)	CO	KL
	Answer all the questions		
1.	a) i) In python, write the code snippet to define variables for each word in the sentence “How do you like Python so far?” and Print the same. ii) Assume the variable sales references a float value. Write a statement that displays the value rounded to two decimal points. <p align="center">(OR)</p> b) i) What is the naming convention for variables? ii) Write about augmented assignment operators with examples.	CO1	K1
2.	a) Write a for loop with two parameter range() function that prints the multiples of 7 between 0 and 100. Print one multiple per line and avoid printing any numbers that aren't multiples of 7. Remember that 0 is also a multiple of 7. <p align="center">(OR)</p> b) Write a turtle graphics statement that draws a circle with a radius of 75 pixels, set pen color, fill color and print title as “Circle”.	CO2	K2
3.	a) Identify the benefits of using a function also explain how to define and invoke a function. <p align="center">(OR)</p> c) Construct a private method in python and explain the benefits of data hiding.	CO3	K3
4.	a) Identify the differences between procedural and object-oriented paradigms. <p align="center">(OR)</p> b) Let s1 be " Welcome " and s2 be " welcome ". Write the code for the following statements: i) Find the length of the String s1. ii) Combine two strings s1 and s2 in s3. iii) Extract index 1 to 4 from s1 iv) Convert string s1 to uppercase v) Replace e with E in s1.	CO3	K3

5.	<p>a) Given lst = [30, 1, 12, 14, 10, 0], how many elements are in lst? Analyse and give the result after applying each of the following statements?</p> <pre>lst.append(40) lst.insert(1, 43) lst.remove(1) lst.pop() lst.sort() lst.reverse()</pre> <p style="text-align: center;">(OR)</p> <p>a) Write a python program that prompts the user to enter two matrices and displays their sum.</p>	CO4	K4
6.	<p>a) Examine how to open a file for reading, writing, and appending, respectively with examples.</p> <p style="text-align: center;">(OR)</p> <p>b) Analyse the differences between a list and a tuple. How do you create a tuple from a list and a list from a tuple? Give examples.</p>	CO4	K4
Q. No.	SECTION B	CO	KL
	(2 x 10=20)		
	Answer all the questions		
7.	<p>a) Construct a program that prompts the user to enter two points. Compute their distance. Display the points and their distance in graphics.</p> <p style="text-align: center;">(OR)</p> <p>b) Build the sum of integers from 1 to 10, from 20 to 37, and from 35 to 49, respectively using loops and functions.</p>	CO3	K3
8.	<p>a) i) Write a python GUI that contains three Radio buttons for colors “Red”, “Green”, and “Blue”. Display selected color on a label. ii) Examine the radiobutton widget in tkinter module.</p> <p style="text-align: center;">(OR)</p> <p>b) Examine exception handling in python and the purpose of the try, except, else, and finally blocks.</p>	CO4	K4
