

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

M. Sc. DEGREE EXAMINATION, NOVEMBER 2023
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 Answer all the questions (6 X 5 = 30) | CO | KL |
|---------------|--|-----------|-----------|
| 1. | a) Discuss the different types of errors in Python. (OR) b) Explain the various types of assignment operators in Python. | CO1 | K1 |
| 2. | a) Describe the different formatting function for numbers in Python with examples. (OR) b) Explain about two-way if-else statements with examples. | CO2 | K2 |
| 3. | a) Identify the various kinds of arguments in the function. Explain it with an example. (OR) b) How the class abstraction and Encapsulation is defined inside the class with an example? | CO3 | K3 |
| 4. | a) Illustrate the various operations defined in lists. (OR) b) Demonstrate how the Top-down design is implemented in a program. | CO3 | K3 |
| 5. | a) Analyze the use of string methods in Python with examples. Describe why strings are immutable. (OR) b) Write a Python program to perform Insertion sort with an example. | CO4 | K4 |
| 6. | a) Discuss the various operations in a file along with its syntax. (OR) b) Compare the usage of Dictionaries and sets. Give an example for their usage. | CO4 | K4 |
| Q. No. | SECTION B Answer all the questions (2 x 10=20) | CO | KL |
| 7. | a) Summarize the various types of looping constructs. Apply the looping construct to find the sum of digits of a given number. (OR) b) What are user-defined functions? How can we pass parameters in user defined functions? Explain with suitable example. | CO3 | K3 |
| 8. | a) Justify that binary search is more efficient than linear search. Explain (OR) b) Compare the usage of lists, tuples data type? Give an example for each data type | CO4 | K4 |
