

- (b) Explain any six methods of dictionary with examples. (8)
4. (a) How would you use the math library to calculate the square root of a number? (5)
- (b) Explain the concept of overriding with an example. (5)
- (c) Explain if and nested if statement with example (5)
5. (a) Explain break, continue and pass statement with suitable example of each. (5)
- (b) Create a class shape and abstract methods area() and perimeter(). Write a Python program to calculate area and perimeter of square, rectangle and triangle using Polymorphism. (10)
6. (a) How do you use try, except, and finally in Python? (5)
- (b) Define the four main pillars of OOP : (10)
- (i) Encapsulation
- (ii) Abstraction
- (iii) Inheritance
- (iv) Polymorphism

(200)

[This question paper contains 4 printed pages.]

Your Roll No.....

Sr. No. of Question Paper : 775

I

Unique Paper Code : 6202451101

Name of the Paper : Programming Using Python

Name of the Course : **Software Development IT/ITES**

Semester

Duration : 2 Hours

Maximum Marks : 60

Instructions for Candidates

- Write your Roll No. on the top immediately on receipt of this question paper.
- Paper is divided into **two** sections. **Section A** is compulsory. **Section B** has total **5** questions, attempt any **3**.
- Each question is of **15** marks.

Section A

- (a) What will be the output of following print statements? (2)
 - print('abc' * 2)
 - print(3*2 // 4)

P.T.O.

- (b) Explain print command in python with suitable example. (2)
- (c) Which of the following python statements are valid and invalid? (2)
- (i) `print(2 + '3')`
 - (ii) `print('2' * 3)`
- (d) Which of the following can be used as valid variable identifier(s) in Python? (2)
- (i) 4thSum
 - (ii) Total
 - (iii) Number#
 - (iv) Data
- (e) What will be the output of the following Python code? (2)
- ```
def show(id, name):
 print("Your id is :", id, "and your name is :", name)
show(12,"John")
```
- (f) Suppose list1 is [3, 4, 5, 20, 5, 25, 1, 3], what is list1 after list1.pop(1)? (2)

- (g) True/False (3)
- (i) Global variables are not created outside all functions and are accessible to all functions in their scope.
  - (ii) A function header begins with the def keyword followed by function's name and parameters, and ends with a colon.
  - (iii) Parameters are optional; that is, a function does not have to contain any parameters.

### Section B

2. (a) Write a program for the given syntax and mention the results. (7)
- (i) `str.isalpha()`
  - (ii) `str.isdigit()`
  - (iii) `str.index()`
- (b) Explain while loop and for loop with suitable examples. (8)
3. (a) Explain all comparison operators of python with suitable examples of each. (7)