Total No. of Questions : 8]

SEAT No. : [ ]

PC-1682

[Total No. of Pages : 3

[6351] - 108
F.E.
Programming and Problem Solving
(2019 Pattern) (Semester - I/II) (110005)

Time : 2½ Hours] ***[Max. Marks : 70***

Instructions to the candidates:

1) ***Solve Q1 or Q2, Q3 or Q4, Q5 or Q6, Q7 or Q8.***
2) ***Neat Diagrams must be drawn wherever necessary.***
3) ***Assume suitable data wherever necessary.***

Q1) a) Explain the concept of a module and a package in python. **[6]**

b) What are the good programming practices in python? Explain any six. **[6]**

c) Write a program to find factorial of a number using user defined function. **[5]**

OR

Q2) a) Explain use of global statement with a suitable example. **[6]**

b) Explain 'the return statement' syntax in a function. Explain implicit and explicit return value in a function with a suitable example. **[6]**

c) Write a program using lambda for the division of two numbers. **[5]**

Q3) a) Explain the following string operations with examples. **[6]**

i) concatenation ii) slicing iii) String multiplication

b) Explain with a suitable example strings are immutable. **[6]**

c) Write a program that accepts a string from user and displays the same string after removing vowels from it. **[5]**

P.T.O.

OR

Q4) a) Explain string iterating using while and for loop with suitable example. **[6]**

b) Explain following string methods with example. **[6]**

i) strip()

ii) ljust()

iii) rindex()

c) Write a program to create a mirror of the given string. For example "abc" = "cba". **[5]**

Q5) a) Explain the following Programming Paradigms in detail. **[6]**

i) Monolithic

ii) Structured

iii) Object Oriented

b) What is class instantiation? How is it done? **[6]**

c) Write a program to calculate area of triangle using a class. **[6]**

OR

Q6) a) Explain the following features of OOP **[6]**

i) Inheritance

ii) Polymorphism

iii) Data abstraction

b) Explain class method with suitable example. **[6]**

c) Write a program that has a class Circle. Use a class variable to define the value of constant P1. Use this class variable to calculate area and circumference of a circle with specified radius **[6]**

Q7) a) What is a file? Explain different Access Modes. **[6]**

b) Explain the following file handling methods. **[6]**

i) seek()

ii) write()

iii) read()

c) Write a program to read a file that contains small case characters. Then write these characters into another file with all lowercase characters converted into Uppercase. **[6]**

OR

Q8) a) Explain the following directory methods with suitable example **[6]**

1) getcwd()

2) rmtree()

3) makedirs()

b) What is a file path? Explain absolute path and relative path. **[6]**

c) Explain the following dictionary methods. **[6]**

i) fromkeys()

ii) copy ()

iii) update