Total No. of Questions : 8]

SEAT No. :

PB3593

[Total No. of Pages : 3

[6260]-8
F.E.
PROGRAMMING AND PROBLEM SOLVING
(2019 Pattern) (Credit System) (Semester - I/II) (110005)

Time : 2½ Hours] *[Max. Marks : 70*

Instructions to the candidates:

1) ***Solve Q.1 or Q.2, Q.3 or Q.4, Q.5 or Q.6, Q.7 or Q.8.***
2) ***Neat diagrams must be drawn weherver necessary.***
3) ***Assume suitable data wherever necessary.***

Q1) a) Write a short note on modules and package in python. **[6]**

b) Explain how we can pass command line arguments in python with a suitable example. **[6]**

c) Write a program to check whether a number is Armstrong number or not using a function. **[5]**

OR

Q2) a) Write syntax of function definition and function call. Give a suitable example for the same. **[6]**

b) Explain the following types of function arguments with examples. **[6]**

i) variable length arguments

ii) default arguments

c) Write a program using lambda function to print a message 'even' if number is even and 'odd' if number is odd. **[5]**

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

i) concatenation

ii) appending

iii) string multiplication

b) Explain string formatting operator with suitable example. **[6]**

c) Write a program that finds whether a given character is present in a string or not. In case it is present it prints the index in which it is present. Do not use built-in find functions to search it. **[5]**

OR

P.T.O.

Q4) a) Explain string module in python. **[6]**

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

i) split()

ii) zfill()

iii) replace()

c) Write a program to reverse a string without using slicing operator. **[5]**

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

i) Procedural

ii) Structured

iii) Object Oriented

b) Differentiate between class variable and object variable. **[6]**

c) Write a program to create a class 'Book' with members, title, author, publisher, and ISBN number. The functions of the class should read and display the data. **[6]**

OR

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

i) Classes and Objects

ii) Methods and Message Passing

iii) Inheritance

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

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

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

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

i) seek()

ii) writelines()

iii) readline()

c) Write a program that reads text from a file and writes in into another file but in the reverse order. (Hint: Make the first line in the original file as the last line in the copied file). **[6]**

OR

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

i) getcwd()

ii) rmtree()

iii) makedirs()

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

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

i) fromkeys()

ii) setdefault()

iii) update()