

Total No. of Questions : 8]

SEAT No. :

PD-4031

[Total No. of Pages : 3

[64011]-1908

F.E.

PROGRAMMING AND PROBLEM SOLVING
(2019 Pattern) (Semester - 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 wherever necessary.*
- 3) *Assume suitable data wherever necessary.*

Q1) a) Define a function with suitable function? Explain need for a function. [6]

b) Differentiate between local and global variables. [6]

c) Write a program using function to find largest of 3 numbers by passing numbers as arguments. [5]

OR

Q2) a) Explain the following types of function arguments with examples:[6]

i) default arguments

ii) variable length arguments

b) What are the modules and packages in python? Explain user defined module with suitable example. [6]

c) Write a program to find square of a number using lambda function. [5]

Q3) a) Explain different ways of iterating a string. [6]

b) Explain the following with suitable example. [6]

i) ord() and chr() function

ii) in and not in operators on string

P.T.O.

- c) What is the output of the following statement for the given string?
S = "Learning Python is fun" [5]
- i) print(S[:10])
 - ii) print(S[::-1])
 - iii) print("Is" not in S)
 - iv) print(S[4])
 - v) print(S[0:10])

OR

- Q4)** a) Explain different ways of formatting a string. [6]
- b) Explain following string methods with example. [6]
- i) isspace()
 - ii) join()
 - iii) lower()
- c) Write a program to display a string and count characters in the string using a loop. [5]

- Q5)** a) What is programming paradigm? Explain the following Programming Paradigms in detail [6]
- i) Monolithic Programming
 - ii) Procedural Programming
- b) Explain the following concepts with example. [6]
- i) Object variable
 - ii) Class variable
- c) Write a python program to create a class Employee with the attributes Name, emp_id, and salary and display data of 4 employees. [6]

OR

- Q6)** a) Explain the following features : [6]
- i) Containership
 - ii) Inheritance
 - iii) Data Abstraction
- b) Explain class method and self-object with suitable example. [6]
- c) Write a program to create class Car with two attributes name and cost. Create two objects and display information. [6]

- Q7)** a) What is a file? Explain relative and absolute path of a file. [6]
- b) Explain the following file handling methods. [6]
- i) read(n)
 - ii) readlines()
 - iii) close()
- c) Explain the following file access modes [6]
- i) r
 - ii) w+
 - iii) ab+
 - iv) rb
 - v) a
 - vi) a+

OR

- Q8)** a) Explain any 3 directory methods with example. [6]
- b) Explain text and binary files with example. [6]
- c) Explain any 3 dictionary methods with example. [6]
