

Total No. of Questions : 9]

SEAT No. :

100

P6995

[Total No. of Pages : 4]

[5868]-107

F.E. (Semester - I & II)

110005 : PROGRAMMING AND PROBLEM SOLVING

(2019 Pattern) (Common)

Time : 2½ Hours]

[Max. Marks : 70

Instructions to the candidates:

- 1) *Question one is compulsory.*
 - 2) *Solve Q2 or Q3, Q4 or Q5, Q6 or Q7, Q8 or Q9.*
 - 3) *Neat diagrams must be wherever necessary.*
 - 4) *Assume suitable data wherever necessary.*

Q1) i) Which one of the following is the correct way of calling a function?

- a) f_name()
 - b) call f_name()
 - c) return f_name()
 - d) function f_name()

What is the correct file extension for Python files?

 - a) .pt
 - b) .pyt
 - c) .py
 - d) .cpp

iii) Which function is used to convert a numeric value to a character.

- a) ord() b) chr()
c) input() d) output()

iv) Which is the default access mode in the open() function for files in Python?

- a) w b) r
c) a d) w+

v) Which method can be used to return a string in upper case letters?

- a) toupper()
 - b) upper()
 - c) uppercase()
 - d) touppercase()

- vi) Which method is automatically executed when an object of a class is created?
- a) `_init_()` b) `_call_()`
c) `_repr_()` d) `_del_()`
- vii) You can use Python for
- a) Application programming b) Web programming
c) Artificial intelligence d) All of these
- viii) Which of the following keyword is used in user defined function header in Python?
- a) `define` b) `def`
c) `function` d) `fun`
- ix) What does `open()` function return?
- a) function b) variable
c) file object d) none of these
- x) Which of the following is the correct way of closing a file?
- a) `close(file)` b) `close("file")`
c) `file.closed()` d) `file.close()`

- Q2)** a) Define a function. Explain function definition and function call with suitable example. [6]
- b) What is a lambda function? Explain with a suitable example. [5]
- c) What are the good Python programming practices? [4]

OR

- Q3)** a) Explain the following types of function arguments with examples:[6]
- i) Required arguments
ii) Keyword arguments
- b) What do you mean by local and global variables? Explain it with example. [5]
- c) Write a program to swap two numbers using a function. [4]

Q4) a) Explain the following string operations with suitable example. [6]

- i) Concatenation
- ii) Appending
- iii) String repetition

b) Explain indexing and slicing operation on string with suitable example. [5]

c) Write a program to count the number of characters and words in the given string. [4]

s = "Welcome to the world of python programming"

OR

Q5) a) Explain following string methods with example. [6]

- i) strip()
- ii) index()
- iii) isdigit()

b) What is a string? Explain with example iterating strings. [5]

c) Explain ord() and chr() functions with suitable examples. [4]

Q6) a) Explain any three programming paradigms. [6]

b) Define a class in Python. Explain __init__ method with suitable example. [5]

c) Explain the concept of a class and an object in OOP. [4]

OR

Q7) a) Explain the following features of Object Oriented Programming. [6]

- i) Data encapsulation
- ii) Data abstraction
- iii) Polymorphism

- b) Explain class variables and object variable with suitable example. [5]
- c) Write a program to create a class ‘Employee’ with two attributes. Display the details of two employees. [4]

- Q8)** a) What is a file? Explain different access modes for opening files. [6]
- b) What is a dictionary? How to create, access and modify dictionary elements. [5]
- c) Explain relative and absolute path of a file. [4]

OR

- Q9)** a) Explain any three methods for reading and writing files. [6]
- b) Explain different directory methods with suitable examples. [5]
- c) Write a program to read first 10 characters from the file and display it. [4]

