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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()

ii) 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()

P.T.O.

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]**

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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"

<div align="center">OR</div>

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]**

<div align="center">OR</div>

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

      i)   Data encapsulation

      ii)   Data abstration

      iii)   Polymorphism

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Other PYQs => www.studymedia.in/fe/pyqs

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]**

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