Total No. of Questions : 10]

SEAT No. :

PE12171

[Total No. of Pages : 2

[6581]-2402

F.E.

PCC-151-ITT : PROGRAMMING AND PROBLEM SOLVING

(2024 Pattern) (Credit System) (Semester - I/II)

Time : 2½ Hours] *[Max. Marks : 70*

Instructions to the candidates:

1) *Attempt Q1 or Q2, Q3 or Q4, Q5 or Q6, Q7 or Q8, Q9 or Q10.*
2) *Neat diagrams must be drawn wherever necessary.*
3) *Figures to the right indicate full marks.*
4) *Assume suitable data, if necessary and clearly state.*

Q1) a) Explain the importance of algorithms and programs in computer problem solving. [3]

b) List different problem solving strategies. Explain any one with an example. [3]

c) Write any four features of the python programming Language. [4]

d) Illustrate top-down design using a suitable example. [4]

OR

Q2) a) Write a pseudo code for swapping two numbers. [3]

b) What is problem solving? List down the difficulties for the problem solving. [3]

c) What is object oriented programming? List down its features with suitable examples. [4]

d) Explain any four python programming language applications in details. [4]

Q3) a) What is dictionary? Mention any two dictionary operations. [3]

b) Explain Loop with flow chart. [3]

c) What is difference between 'break' and 'continue' statement in python? [4]

d) Write a program to test whether a number entered by user is positive, negative or zero. [4]

OR

Q4) a) Explain use of range ( ) function in for loop with suitable example. [3]

b) Evaluate the importance of decision control statements in program execution. [3]

c) Differentiate between if-else and if-elif-else statement. [4]

d) Demonstrate the use of tuple data type with a suitable python program. [4]

P.T.O.

SPPUQuestionPapers.com

Q5) a) Write a Lambda function to check whether a number is positive or negative. **[4]**

b) Explain string immutability with an example. **[5]**

c) Explain slice operation in strings with an example. **[5]**

OR

Q6) a) Define the chr () function. How is it different from ord()? **[4]**

b) Develop a python program that counts the number of vowels and consonants in a given string using iteration. **[5]**

c) Define function, explain function defination and function call with suitable example. **[5]**

Q7) a) How can you check the current file position in a file. **[4]**

b) What is file path? Differentiate between absolute path and relative path. **[5]**

c) Discuss file handling. List down the handling operations with examples. **[5]**

OR

Q8) a) What does the flush ( ) method do in file handling. **[4]**

b) Explain the difference between read ( ) and readlines ( ) methods. **[5]**

c) Discuss the purpose of file manipulation operations like renaming and deleting. **[5]**

Q9) a) Describe the concept of data abstration and encapsulation in object oriented programming. **[4]**

b) How do the _init_( ) and _del_( ) methods help in creating and cleaning up objects in python? **[5]**

c) Differentiate between class & object with example. **[5]**

OR

Q10) a) What is polymorphism? Give two types of polymorphism in object oriented programming. **[4]**

b) Discuss garbage collection in python. How does it manage memory for objects? **[5]**

c) Differentiate between public and private members with example. **[5]**

SPPUQuestionPapers.com
CEGP019111 103.17.156.250 13/01/2026 09:30:58