Total No. of Questions : 8]

SEAT No. : ____

P-3664

[Total No. of Pages : 3

[6001]-4008
F.E. (Semester - II)
PROGRAMMING AND PROBLEM SOLVING
(2019 Pattern) (110005)

Time : 2½ Hours] ***[Max. Marks : 70***

Instructions to the candidates :

1) ***Question one is compulsory.***
2) ***Solve Q.1 or Q.2, Q.3 or Q.4, Q.5 or Q.6 and Q.7 or Q.8.***
3) ***Neat diagrams must be wherever necessary.***
4) ***Assume suitable data wherever necessary.***

Q1) a) Explain in-built and user defined functions with syntax and suitable example. **[6]**

b) Explain the following terms with suitable examples. **[6]**

i) local variable

ii) global variable

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

OR

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

i) positional arguments

ii) variable length arguments

b) Explain different ways of importing an in-built module in python with suitable example. **[6]**

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

Q3) a) Justify strings are immutable with example. **[6]**

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

i) ord() and chr() function

ii) in and not in operators on string

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c) What is the output of the following statement for the given string? **[5]**

S = “Programming and Problem Solving”

i) print(S[:11])

ii) print(S[::-1])

iii) print("And" not in S)

iv) print(S[4])

v) print (S[0:10])

OR

Q4) a) Explain string format operator with suitable example. **[6]**

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

i) title()

ii) startswith()

iii) zfill()

c) Write a program to display a string and count characters in the string using a loop. **[5]**

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

i) Monolithic Programming

ii) Structured Programming

iii) Object Oriented Programming

b) Explain the following concepts with example. **[6]**

i) public members

ii) private members

c) Write a python program to create a class Student with the attributes Name, roll no and age and display data of 4 students. **[6]**

OR

Q6) a) Explain any three object oriented features in brief. **[6]**

b) Explain class method and class variable with suitable example. **[6]**

c) Write a program to calculate area of triangle using a class. **[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) write()

ii) writelines()

ii) close()

c) Explain file access modes in brief. **[6]**

OR

Q8) a) Explain different directory methods with example. **[6]**

b) Differentiate between text and binary files. **[6]**

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

i) update()

ii) keys()

iii) pop()

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