

Total No. of Questions : 8]

SEAT No. :

P-9073

[Total No. Of Pages : 3

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F.E.

**Programming and Problem Solving
(2019 Pattern) (Semester - I) (110005)**

Time : 2½ Hours]

[Max. Marks : 70

Instructions: 1) Solve Q1 or Q2, Q3 or Q4, Q5 or Q6, Q7 or Q8.

2) Figures to the right indicate full marks.

3) Neat Diagrams must be wherever necessary.

4) Assume suitable data wherever necessary.

- Q1)** a) Define a function with suitable example? Explain need for a function. [6]
b) Differentiate between local and global variables. [6]
c) Write a program using function to find square of a number. [5]

OR

- Q2)** a) Explain the following types of function arguments with examples: [6]
i) default arguments ii) keyword arguments
b) Explain user defined module and package in Python. [6]
c) Write a program to perform addition of two numbers using lambda function. [5]

- Q3)** a) Explain string indexing and slicing with suitable example. [6]
b) Explain the following with suitable example. [6]
i) ord() and chr() function ii) in and not in operators on string
c) What is the output of the following statement for the given string?
st = "Python is an interpreted programming language." [5]
i) print (st [12:20])
ii) print (st [:- 1])
iii) print ("an" not in st)
iv) print (st [17])
v) print (st [0:23])

P.T.O.

OR

- Q4)** a) Explain string format method with suitable example. [6]
- b) Explain following string methods with example. [6]
- i) title()
 - ii) capitalize()
 - 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 2 employees. [6]

OR

- Q6)** a) Explain the following features [6]
- i) Class
 - ii) Inheritance
 - iii) Polymorphism
- 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 3 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) write()
 - ii) tell()
 - iii) seek()
- c)** Explain the following file access modes [6]
- i) r ii) w iii) a iv) rb v) wb vi) r+

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]

