

Total No. of Questions : 8]

PE-902

SEAT No. :

[Total No. of Pages : 3

[6581]1908

F.E. (Programme)

PROGRAMMING AND PROBLEM SOLVING

(2019 Pattern) (Semester - I/II) (110005)

Time : 2½ Hours]

[Max. Marks : 70

Instructions to the candidates :

1) Answer Q1 or Q2, Q3 or Q4, Q5 or Q6, Q7 or Q8.

2) Figures to the right indicate full marks.

Q1) a) Explain the following with an example [5]

i) Keywords arguments

ii) Default arguments

b) Write a program to swap 2 numbers using a function [6]

c) What are [6]

i) Local Variables

ii) Global Variables. Explain with an example

OR

Q2) a) Explain the following with an example : [5]

i) Positional arguments

ii) Unlimited positional arguments

b) What is a Lambda function. Explain with an example using 2 arguments [6]

c) What is a function? Write a program to return the addition and multiplication of 2 numbers taken as input from the user using a function [6]

P.T.O.

- Q3)** a) Explain f-string method of string formatting with an example [5]
b) Explain the following with suitable example [6]
i) `is` and
ii) `is not` operators on string
c) What is the output of the following statement for the given string (i to vi)?
S = "Programming and Problem Solving" [6]
i) `print(S[16:])`
ii) `print(S[28:2])`
iii) `print(S[:19:1])`
iv) `print ("and" in S)`
v) `print(S[::2])`
vi) `print(S[::-1])`

OR

- Q4)** a) Explain the following string methods with an example [5]
i) `title()`
ii) `rstrip()`
b) Explain the following with suitable example [6]
i) `ord()` function
ii) `chr()` function
c) Write a program to count the number of consonants in a string. Hint - consonants are letters that are not (a, e, i, o, u) [6]

- Q5)** a) Explain the following programming paradigm [6]
i) Monolithic Programming
ii) Structured Programming
b) Explain the following with a suitable example [6]
i) Inheritance
ii) Function overriding
iii) Class Variables
c) Write a program to calculate the area of a square and rectangle using a class. [6]

OR

- Q6)** a) Explain the following with a suitable example [6]
i) Class Method
ii) Object
iii) Constructor
- b) Explain the following programming paradigm [6]
i) Procedural Programming
ii) Object Oriented Programming
- c) Write a program to create a class Book with two attributes Name and Author. Create 3 objects and display the information. [6]

- Q7)** a) Differentiate between text and binary files [6]
b) Explain the following dictionary methods [6]
i) update ()
ii) keys ()
iii) popitem ()
- c) Write a python program that read data from one file and writes into another file line by line Hint: First line in the original file will be the first line in copied file [6]

OR

- Q8)** a) Explain the following file handling methods with an example [6]
i) readlines ()
ii) write ()
iii) tell ()
- b) Explain the following access modes [6]
i) rb
ii) rb+
iii) ab+
- c) Write a program that reads text from one file (line by line) and writes into another file but in the reverse order [6]

