

# P P SAVANI UNIVERSITY

Second Semester of B. Tech. Examination

May 2019

SECE1040 Programming with Python

Time: 12:30 p.m. to 3:00 p.m.

18.05.2019, Saturday

Maximum Marks: 60

## Instructions:

1. The question paper comprises of two sections.
2. Section I and II must be attempted in separate answer sheets.
3. Make suitable assumptions and draw neat figures wherever required.
4. Use of scientific calculator is allowed.

## SECTION - I

Q - 1 Answer the following. (Any Five)

(i) Write output of the following code. [05]

```
a = 10
a = 10.5
```

```
print a
```

(ii) Define set.

(iii) What is the use of sys module in python?

(iv) Explain any one method of dictionary.

(v) What is the output of the following code?

```
print(9//2)
```

(vi) Write output of the following code.

```
a=10
```

```
while (a>10):
```

```
    print(a)
```

```
else:
```

```
    print(a+1)
```

(vii) Give an example of strip() function of string.

Q - 2 (a) Define a function is\_palindrome() that recognizes palindromes (i.e. words that look the same written backwards). For example, is\_palindrome("radar") should return True. [05]

Q - 2 (b) Write a note on features of Python. [05]

OR

Q - 2 (a) Write a program that takes a set of words as input and returns longest word from that set. [05]

Q - 2 (b) Explain anonymous functions with appropriate examples. [05]

Q - 3 (a) Define a function overlapping() that takes two lists and returns True if they have at least one member in common, False otherwise. [05]

Q - 3 (b) What is the difference between mutable and immutable data types in python? Explain any two immutable data types with their syntax and example. [05]

OR

Q - 3 (a) Write a python program to count the frequency of words appearing in a string using a dictionary. [05]

Q - 3 (b) Explain the usage of functions supported by numpy package with appropriate example. [05]

Q - 4 Attempt any One. [05]

(i) Write a python program that demonstrates use of pass and continue. [05]

(ii) Write a python program to print Fibonacci series from integers 1 to 10.

## SECTION - II

Q - 1 Answer the following (Any Five)

(i) What is the purpose of the \_\_init\_\_ method in a class? [05]

- (ii) What will be the output if user inputs 'python'?
- ```
try:
    x = int(input())
    print(x)
except ValueError:
    print('Wrong!')
print('End')
```
- (iii) What is an exception?
- (iv) What is the output of the code fragment?
- ```
import re
str="All the Best"
x=re.findall('[a-z]', str)
print (x)
```
- (v) What is file handler?
- (vi) What is the output of the code fragment?
- ```
import re
str= "Have a nice day ahead"
x=re.sub("\s", "+", str, 2)
print(x)
```
- (vii) OOP stands for \_\_\_\_\_
- Q - 2 (a) Write a Python program to create a class bank account to provide necessary functionalities [05]  
as followings:  
a. Deposit in Account  
b. Withdraw from Account ( withdrawal amount should not be more than total amount deposited in account)  
c. Search a valid account no  
d. Setter() method for inputting appropriate data  
e. display\_info() to display the account class  
Create an object P1 to demonstrate the functionality of bank class.
- Q - 2 (b) Write a note on classes, objects, constructor, destructor and class attributes. [05]
- OR**
- Q - 2 (a) Write a program to find occurrences/frequency of each word present in a text file (abc.txt). [05]  
Assume content of file is "It was the best of times. It was the worst of times. It was the age of wisdom. It was the age of foolishness".
- Q - 2 (b) What is Inheritance? Explain different types of inheritance in Python using suitable examples. [05]
- Q - 3 (a) Create a complex class with two attributes r (real) and i (imaginary). Write a program to add two complex numbers using the concept of polymorphism. [05]
- Q - 3 (b) Write a program that will prompt the user for a string and a file name, and then print all lines in the file that contain the string. [05]
- OR**
- Q - 3 (a) What is an Exception? Explain different types of exception. Explain the procedure to handle exceptions. [05]
- Q - 3 (b) Write a Python program that matches a word/words containing 'o' in the string "Programming with Python". [05]
- Q - 4 **Attempt any One** [05]
- (i) Explain different regular expression functions in Python (with example).
- (ii) Write a program to handle the ZeroDivisionError exception.

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