

# P P SAVANI UNIVERSITY

Third Semester of B.Sc. (IT) Examination

December 2021

SSIT2020 Programming with Python

10/12/2021, Friday

Time: 09:00 a.m. To 11:30 a.m.

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) [05]

- (i) + operator has highest precedence. State true or false.
- (ii) What is the output of `print(2 ** 3 ** 2)`?
- (iii) Whatever you enter as input, the `input()` function converts it into a string. State true or false.
- (iv) Tuple is immutable. State true or false.
- (v) `print(type('5'))` returns \_\_\_\_\_
- (vi)  $5//2 = 2.5$ . State true or false.

Q - 2 (a) Explain for-else with an example. [05]

Q - 2 (b) Write a python program to make a simple calculator for given inputs. [05]

OR

Q - 2 (a) What is the difference between `pass` and `continue`? Explain with example. [05]

Q - 2 (b) Explain the uses of `range` operation in python with an example. [05]

Q - 3 (a) What is dictionary in Python? Explain with example. [05]

Q - 3 (b) Write a short note on NumPy array. [05]

OR

Q - 3 (a) What is a list in Python? Explain with example. [05]

Q - 3 (b) Differentiate between `delete()`, `remove()` and `pop()` in lists and tuples. [05]

Q - 4 Attempt any one. [05]

- (i) What are the advantages and disadvantages of array?
- (ii) Explain `str()` and `len()` with examples.

## SECTION - II

Q - 1 Answer the Following. (Any five) [05]

- (i) What are the two main types of functions in Python?
  - a) System function
  - b) Custom function
  - c) Built-in function & User defined function
  - d) User function
- (ii) Which statement is correct to import all modules from the package?
  - a) `from package import all`
  - b) `from package import *`
  - c) `from package include all`
  - d) `from package include *`
- (iii) Which of the following will read entire content of file(file object 'f')?
  - a) `f.reads()`
  - b) `f.read()`
  - c) `f.read(all)`

- d) `f.read( * )`
- (iv) \_\_\_\_ is used to create an object.
- class
  - constructor
  - User-defined functions
  - In-built functions
- (v) Which of the following error is returned when we try to open a file in write mode which does not exist?
- FileNotFoundError
  - FileNotFoundError
  - FileNotExistError
  - None of the above
- (vi) What is true about Inheritance in Python?
- Inheritance is the capability of one class to derive or inherit the properties from another class.
  - It represents real-world relationships well.
  - It provides reusability of a code.
  - All of the above
- (vii) What will be output for the following code?
- ```
try:
    print(x)
except:
    print("""An exception occurred""")
```
- x
  - An exception occurred
  - Error
  - None of the above
- Q - 2 (a)** Define Function. List down types of function. Explain Parameter passing mechanism. [05]
- Q - 2 (b)** List and explain Parameter Passing techniques with example. [05]
- OR**
- Q - 2 (a)** What are python modules? Name some commonly used built-in modules in Python? [05]
- Q - 2 (b)** Write a Python program to find factorial of a number using recursion. [05]
- Q - 3 (a)** Explain classes and objects in python. [05]
- Q - 3 (b)** Explain Inheritance in Python with an example. [05]
- OR**
- Q - 3 (a)** What is `__init__`? Explain with example. [05]
- Q - 3 (b)** Explain Polymorphism in Python with an example. [05]
- Q - 4** Attempt any one. [05]
- What is an Exception? List some few common Exception types.
  - What is the shortest method to open a text file and display its content?

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