P P SAVANI UNIVERSITY

Third Semester of B. Tech. Examination

December 2022

SECE2120 Programming with Python

03.12.2022, Saturday **Time: 10:00 a.m. To 12:30 p.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]**	**CO**	**BTL**
(i)	If I want to assign nothing to a variable X in python, which of the following is true? a) X = None b) X = Null		**2**	**2**
(ii)	What will be the output of the following code? mylist = ["apple", "banana", "cherry"] print(type(mylist)) a) <type 'list'> b) <class 'list'> c) <print 'list'>		**2**	**2**
(iii)	Which of the following is used to define a block of code in python? a) Key b) Brackets c) Indentation d) All of the mentioned		**1**	**1**
(iv)	Which of the following character is used to give single-line comments in python? a) // b) # c) ! d) /*		**2**	**2**
(v)	What will be the output of the following python code? len(["hi",2, 3, 6]) a) No output b) prints value 4 c) prints value 3 d) Shows errors		**2**	**2**
(vi)	Which arithmetic operators cannot be used with strings in python? a) * b) - c) + d) All of the mentioned		**1**	**1**
(vii)	What will be the output of the following python code?		**2**	**2**

```
x = 3+5j
y = 4
print(x+y)
```

a) Error
b) 7 + 5j
c) 3 + 9j
d) 12j

Q - 2 (a)	What is the main feature of Dictionary? Explain any four methods of Dictionary with examples.	[05]	2	4
Q - 2 (b)	Explain conditional statements available in python. [Any two with example]	[05]	3	3
	OR			
Q - 2 (a)	Explain looping statements available in python. [Any two with example]	[05]	3	3
Q - 2 (b)	Differentiate between Array and List in python.	[05]	3	4
Q - 3 (a)	Differentiate between built-in functions and user-defined functions.	[05]	2	4
Q - 3 (b)	Explain the break keyword with syntax and examples.	[05]	3	3
	OR			
Q - 3 (a)	Explain continue keyword with syntax and example.	[05]	3	3
Q - 3 (b)	What is typecasting? Explain with an example.	[05]	3	3
Q - 4	Attempt any one.	[05]	3	3
(i)	Explain various functions to manipulate String values.		2	5
(ii)	Write a python program to arrange entered numbers in ascending order. [Do not use any built-in functions of String]		3	6
	SECTION – II			
Q - 1	Answer the following (Any Five)	[05]		
(i)	A python function can return multiple values. State true or false.		1	1
(ii)	'a' mode gives error when you try to open a file that does not exist. State true or false.		2	2
(iii)	init__ is the object of a class. State true or false.		1	1
(iv)	Python supports operator overloading. State true or false.		1	1
(v)	5/0 will return a _____ exception.		2	2
(vi)	Error and exception are same. State true or false.		1	1
Q - 2 (a)	Write a syntax of Class, which has two variables, a constructor to initialize values of properties and one method which can display the values of properties.	[05]	3	5
Q - 2 (b)	Explain the concept of packages in python.	[05]	3	4
	OR			
Q - 2 (a)	Explain Inheritance in python with an example.	[05]	3	5
Q - 2 (b)	Explain various file handling modes for input-output operations in python with example.	[05]	3	5
Q - 3 (a)	What is the basic difference between an error and an exception? Differentiate between run time errors and compile time errors.	[05]	3	4
Q - 3 (b)	Write python code to validate whether entered email ID is in proper format or not. Note : Email ID can contain only .(dot) or @(at the rate) sign	[05]	3	6
	OR			
Q - 3 (a)	Explain the Polymorphism in python with example.	[05]	2	2
Q - 3 (b)	Write python code to validate Student ID.	[05]	3	6

Note: Student ID must be of 12 characters in which first three characters and the last character must be alphabets while the remaining characters must be numeric value only.

Q - 4	Attempt any one.	**[05]**		
(i)	Explain exception handling concept with example in python		**3**	**6**
(ii)	Write python code to perform division of two entered numbers by validating if second number is zero.		**3**	**6**

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CO : Course Outcome Number BTL : Blooms Taxonomy Level

Level of Bloom's Revised Taxonomy in Assessment

1: Remember	2: Understand	3: Apply
4: Analyze	5: Evaluate	6: Create