

Hall Ticket Number:

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Code No. : 14109 IPP

**VASAVI COLLEGE OF ENGINEERING (Autonomous), HYDERABAD**  
**B.E. (CBCS) IV-Semester Main Examinations, May-2018**

**Introduction to Python Programming**  
(Open Elective-III)

Time: 3 hours

Max. Marks: 70

*Note: Answer ALL questions in Part-A and any FIVE from Part-B*

**Part-A (10 × 2 = 20 Marks)**

1. Pretend that you are a Python interpreter. Evaluate each of the expressions given below. Write down the value they evaluate to and the type of that value.
  - i) "a"+"b"\*2
  - ii) not(100<0 or 100<200)
2. Analyze the following code segment and find the output:

```
i=1
while(i<=6):
print(i, end=" ")
i=i+1
print("Done")
```

Also change the given while loop into equivalent for loop.
3. List out any four advantages of using functions in Python.
4. Write the output of this program. Briefly explain the working of this code.

```
num = 10
def show():
num= 20
print("In function, value of num is:",num)
show()
print("Outside function ,value of num is:",num)
```
5. Demonstrate with suitable examples, the different ways to iterate a string.
6. With the help of an example, explain how nested list can be used to represent matrices in Python.
7. Illustrate with suitable examples, how aliasing and copying can be performed in dictionaries.
8. Distinguish between tuples and lists .Also write the python statement(s) which convert a list of characters into tuple.
9. Illustrate the use of the following built-in functions with example.
  - i) type()
  - ii) sqrt()
10. What do you mean by mutability of a data structure? Explain with the help examples, why we say that lists are mutable while tuples are immutable

**Part-B (5 × 10 = 50 Marks)**

11. a) Illustrate break and continue with suitable examples [4]  
b) Write a Python program that prompts the user to enter a number. Display whether the number is prime or composite. If the number is "1" display it as "neither prime nor composite." [6]

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12. a) Distinguish between local variables and global variables [4]  
b) Develop a menu driven Python program to calculate the area of circle, rectangle and square. Use separate functions to implement each operation. Output should be displayed according to the shape entered by user. [6]
13. a) With the help of examples, explain the significance of membership operators in list. [4]  
b) Create a Python function `is_Present()`, which accepts a string and a character as arguments and returns the index of the character if it is present in the string else return -1 [6]
14. a) What is the importance of tuple assignment in Python? Give an account of `zip()` function. [3]  
b) Develop a Python program to create a dictionary of roll numbers and names of 5 students. Display the contents of dictionary in alphabetical order of names. [7]
15. a) "Expressions can be passed as arguments to the function." Justify the statement with suitable examples. [3]  
b) Define recursion and how it helps to solve the problems? Implement a python program to find the factorial of two numbers using recursive functions. [7]
16. a) Discuss the different ways in which you can create a list. [3]  
b) Create a Python function `palindrome()`, which prompt the user to enter a string and return whether the string is Palindrome or not. [7]
17. Answer any *two* of the following:
- a) Give the syntax of if statement in Python. Explain how alternative execution and chained conditionals performed in Python with examples. [5]  
b) You are given with a series "0,1,1,2,3,5,8.....". Write Python code to implement the given series [5]  
c) Implement python code to remove all the duplicates from the list. [5]

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