

NB-101

November-2022

B.C.A., Sem.-V

CC-302 : Python Programming

Time : 2½ Hours]

[Max. Marks : 70

1. Write the following :

- (i) List and explain different flavors of Python. 7
- (ii) Give differences between Java and Python. 7

OR

- (i) List out built-in datatypes of Python. How can we determine the datatype of a variable in python ? Explain range datatype and set datatype. 7
- (ii) What is the use of the control statements in python ? Explain else suite, pass and assert statements with example. 7

2. Write the following :

- (i) Explain how can we create an array from another array. Explain indexing and slicing on array with example. 7
- (ii) Define actual arguments. Explain default arguments and variable length arguments. 7

OR

- (i) What is the difference between list and tuple ? Explain aliasing and cloning lists with example. 7
- (ii) How can we create dictionary ? Explain any six dictionary methods. 7

3. Write the following :

- (i) What is constructor ? Explain constructor overriding and method overriding in Python with example. 7
- (ii) Define polymorphism. Explain duck typing philosophy of Python in detail. 7

OR

- (i) How can we create object of class ? Explain it with example. Explain instance methods and class methods in detail. 7
- (ii) Define operator overloading. How to overload the operators in Python ? Explain with example. 7

4. Write the following :

- (i) Explain following functions of standard library with syntax and example. : 7
getcwd(), glob(), findall(), today().
- (ii) How can we establish Python connection with MySQL database ? Write the steps for inserting and deleting rows in/from table. 7

OR

- (i) List out types of errors in Python. Give difference between error and exception. Explain exception handling in detail. 7
- (ii) Define virtual environment. Why is it required ? Explain the commands of pip.: 7
install, show, search, freeze.

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5. Attempt any seven out of twelve.

- (1) The following _____ operators are membership operators.
(a) in and not in (b) is and is not
(c) in and is (d) None
- (2) To separate the output with a comma, _____ is used.
(a) end attribute (b) sep attribute
(c) format() (d) None
- (3) The split() method by default splits the values where a _____ is found.
(a) comma (b) semicolon
(c) space (d) None
- (4) An anonymous function is defined using _____ keyword.
(a) lambda (b) def
(c) self (d) cls
- (5) The _____ method returns how many times the element is found in tuple.
(a) index() (b) tuple()
(c) len() (d) count()
- (6) Does Python support method overloading ? Justify your answer.
- (7) What is the output of following code ?

```
import random
```

```
lst = ["potato", "tomato", "brinjal", "chilly"]
```

```
print(random.choice(lst))
```

- (a) potato (b) potato, chilly, tomato
(c) potato, chilly, brinjal (d) chilly, brinjal

- (8) If we want access instance variables, use dot (.) operator notation along with ____.
- (a) cls (b) self
(c) def (d) None
- (9) MRO stands for ____.
- (a) Method Revolution Order (b) Method Resolution Overload
(c) Method Resolution Order (d) Method Revolution Overload
- (10) The pip list command will display ____ in the virtual environment.
- (a) information about package
(b) all of the packages installed
(c) upgrade information about packages
(d) install the latest version of a package
- (11) Give difference between function and method.
- (12) The cursor() method creates a cursor object that is capable for executing SQL query on database. (True/ False)
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