BRAINWARE UNIVERSITY

Term End Examination 2024-2025
Programme – Dip.RA-2023
Course Name – Python Programming
Course Code - ECOE401B
(Semester IV)

Full Marks : 60   **Time : 2:30 Hours**

[The figure in the margin indicates full marks. Candidates are required to give their answers in their own words as far as practicable.]

Group-A
(Multiple Choice Type Question)   1 x 15=15

1. *Choose the correct alternative from the following :*

(i) Select the output of the following code.

    a=3

    b="12"

    print (a*b)

    a) 36   b) 121212
    c) 123   d) Error: Invalid operation, unsupported
                                                       operator '*' used between 'int' and 'str'

(ii) Select the output of the following code.

    a=-9//7

    print(a)

    a) -1   b) -2
    c) -1.28   d) 1.28

(iii) Predict the output of the following code.

    x=10

    y=5

    z=3

    ans=x+y%z

193 - 11

print(ans)

a) 12.0
b) 12
c) 11.667
d) 11

(iv) Consider a following code snippet. Identify the data type of y.

```
x=15

y=str(float(x))
```

a) int
b) float
c) str
d) Code will throw an error

(v) Examine the list,

Mylist =['a', 'a', 'b', 'b', 'b', 'c', 'c', 'd', 'e']

choose the output of the code: Mylist.index('d') is

a) 7
b) 8
c) 4
d) 6

(vi) Research which of the following methods is used to find the length of a string in Python

a) length()
b) size()
c) len()
d) count()

(vii) Show what is the output of the following code snippet: str = "Python"; print(str * 3)

a) PythonPythonPython
b) Python3
c) Error
d) Mention answers are not appropriate

(viii) Cite what is the output of the following code snippet: str = "Python Programming"; print(str.split())

a) ['Python', 'Programming']
b) Python Programming
c) Error
d) Mention answers are not appropriate

(ix) Apply which of the following operations is NOT supported by lists in Python

a) Concatenation using the '+' operator
b) Repetition using the '*' operator
c) Division using the '/' operator
d) Indexing using square brackets

(x) Articulate what is the purpose of the append() method in Python lists

a) It adds an element to the end of the list
b) It removes an element from the list
c) It sorts the elements of the list
d) It reverses the elements of the list

(xi) Compute what is the output of the following code snippet: my_list = [1, 2, 3, 4, 5]; print(my_list[::-1])

a) [5, 4, 3, 2, 1]
b) [1, 2, 3, 4, 5]
c) [5, 4, 3, 2]
d) Error

(xii) Show which of the following is NOT a type of function in Python

a) Built-in functions
b) User-defined functions
c) Recursive functions
d) Loop functions

(xiii) Show what is the output of the following code snippet: result = lambda x: x * 2; print(result(3))

a) 6
b) 9
c) Error
d) Mention answers are not appropriate

(xiv) Identify the output of the following code snippet: import random; print(random.randint(1, 10))

a) A random integer between 1 and 10
b) Error
c) 'A random integer between 1 and 10' and 'Error'.
d) Mention answers are not appropriate

(xv) Name the purpose of the open() function in Python.

a) It opens a file for reading or writing
b) It prints output to the screen
c) It reads input from the keyboard
d) It closes a file

Group-B
(Short Answer Type Questions)   3 x 5=15

2. Explain different data types in Python with examples.   (3)

3. Illustrate the different ways to access characters from a string with examples. (3)

4. Explain the concept of key-value pairs in dictionaries and how they are accessed. (3)

5. Illustrate how multiple objects can be created from a single class in Python with examples. (3)

6. Evaluate the immutability of tuples in Python.   (3)

OR

Explain how can you access individual elements and slices of a tuple in Python with examples. (3)

Group-C
(Long Answer Type Questions)   5 x 6=30

7. Differentiate between local and global variables in Python with examples.   (5)

8. Write a python code to design a function to form the Fibonacci Series.   (5)

9. Write a python program to input month number and print number of days in that month. (5)

10. Explain the concept of nested tuples in python with examples.   (5)

11. Evaluate the advantages of using tuples over lists in certain situations with examples of scenarios. (5)

12. Illustrate the concept of polymorphism in Python with examples.   (5)

OR

Explain about inheritance in Python with its types.   (5)

****