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BRAINWARE UNIVERSITY

Term End Examination 2024-2025

Programme – M.Tech.(RA)-2024

Course Name – Python Programming for Automation

Course Code - MEC20303A

(Semester II)

Library

Brainware University
398, Ramkrishnapur Road, Barasat
Kolkata, West Bengal-700125

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 correct option among the following that is a valid variable name in Python:
 - a) 2names
 - b) myVar
 - c) global
 - d) lambda
- (ii) Identify the output of the following Python code: `print(3 + 5 * 2)`
 - a) 13
 - b) 16
 - c) 11
 - d) 10
- (iii) Estimate the definition for packages in Python?
 - a) A set of main modules
 - b) A folder of python modules
 - c) A number of files containing Python definitions and statements
 - d) A set of programs making use of Python modules
- (iv) Examine which one of the following is not a keyword in Python language?
 - a) pass
 - b) loop
 - c) assert
 - d) nonlocal
- (v) Determine the module in the python standard library parses options received from the command line?
 - a) getarg
 - b) getopt
 - c) main
 - d) os
- (vi) Analyze the arithmetic operators cannot be used with strings in Python?
 - a) *
 - b) –
 - c) All of the mentioned
- (vii) Estimate which Python commands used to add a new element to a list?

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a) list1.addEnd(5)
c) list1.append(5)

b) list1.addLast(5)
d) list1.add(5)

(viii) Evaluate what will be the output of the following Python expression? `round(4.576)`

a) 4
c) 5

b) 4.6
d) 4.5

(ix) Compute which of the following is correctly evaluated for this function? `pow(x,y,z)`

a) $(x**y) / z$
c) $(x**y) \% z$

b) $(x / y) * z$
d) $(x / y) / z$

(x) Predict character which is used for commenting in Python?

a) #
c) @

b) !
d) *

(xi) Evaluate what gets printed? `Nums=set([1,1,2,3,3,3,4]) print len(nums)`

a) 2
c) 5

b) 4
d) 7

(xii) Identify the option that is NOT a valid Python data type

a) list
c) tuple

b) dictionary
d) struct

(xiii) In Python, Determine which of the following is the correct way to implement multiple inheritance?

a) Using the `super()` function in the child class
c) Using the `inherit()` method

b) Listing multiple parent classes in the child class definition
d) Defining a separate interface for each parent class

(xiv) Compute the output of the following code

```
def func(a, b=[]):
    b.append(a)
    return b

print(func(1))
print(func(2))
print(func(3))
```

a) [1] [2] [3]
c) [1] [2] [3] []

b) [1] [1, 2] [1, 2, 3]
d) SyntaxError

(xv) Determine the output of the following code

```
x = [1, 2, 3]
y = x
y += [4, 5]
print(x)
```

a) [1, 2, 3]
c) TypeError

b) [1, 2, 3, 4, 5]
d) [4, 5]

3. Describe the features of python. Define python interpreter. (3)
4. Explain the use of the if statement in Python. (3)
5. Compute a Python program to count the number of alphabets and number of digits in the string 'Nagpur-440010'. (3)
6. Estimate how exception handling done in Python? Provide an example. (3)

OR

Evaluate what is the difference between `is` and `==` in Python. (3)

Group-C
(Long Answer Type Questions)

5 x 6=30

7. Express a Python program to implement the concept of inheritance. (5)
8. Explain how can you automate sending emails in Python. (5)
9. Explain the method overriding in Python with an example. (5)
10. List and explain various object-oriented programming concepts available in Python. (5)
11. Determine the resolution of an image file and then print the resolution value using a function in Python. (5)
12. Analyze Indexing and Slicing operation for the list with example in python. (5)

OR

Analyze Inheritance in python with example. (5)

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