BRAINWARE UNIVERSITY

Term End Examination 2024-2025
Programme – B.Tech.(RA)-2022/B.Tech.(RA)-2023
Course Name – Python Programming
Course Code - ESCR401
(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 correct option to delete a file in python.
a) del(fp) b) fp.delete()
c) os.remove('file') d) os.delete('file')

(ii) Select the keyword which is used to define the block of statement in the function.
a) Function b) def
c) func d) pi

(iii) Discuss which represents an entity in the real world with its identity and behaviour.
a) A method b) An object
c) A class d) An operator

(iv) Select the purpose of getattr() used for.
a) To access the attribute of the object b) To delete an attribute
c) To check if an attribute exists or not d) To set an attribute

(v) Select the purpose of delattr(obj,name) used for.
a) To print deleted attribute b) To delete an attribute
c) To check if an attribute is deleted or not d) To set an attribute

(vi) Select the purpose of duck typing.
a) More restriction on the type values that can be passed to a given method b) No restriction on the type values that can be passed to a given method
c) Less restriction on the type values that can be passed to a given method d) Makes the program code smaller

(vii) Write the difference between r+ and w+ modes of file opening.
a) no difference b) in r+ the pointer is initially placed at the beginning of the file and the pointer is at the end for w+
c) in w+ the pointer is initially placed at the beginning of the file and the pointer is at d) depends on the operating system

the end for r+

(viii) Write the advantages of using function.

a) Reduce duplication of code
b) Clarity of code
c) Reuse code
d) All

(ix) Write the output of the following Python code.

```
print("abc. DEF".capitalize())
```

a) Abc. def
b) abc. def
c) Abc. Def
d) ABC. DEF

(x) Which of the following Python statements will result in the output: 6? A = [[1, 2, 3], [4, 5, 6], [7, 8, 9]]

a) A[2][1]
b) A[1][2]
c) A[3][2]
d) A[2][3]

(xi) Write the output of the following Python program.

```
i = 0
while i < 5:
print(i)
i += 1
if i == 3:
break
else:
print(0)
```

a) error
b) 0 1 2 0
c) 0 1 2
d) none of the mentioned

(xii) Write the output of the following Python code snippet.

```
z=set('abc$de')
'a' in z
```

a) Error
b) True
c) False
d) No output

(xiii) Write the output of the following Python code.

```
class test:
def __init__(self,a="Hello World"):
self.a=a
def display(self):
print(self.a)
obj=test()
obj.display()
```

a) The program has an error because constructor can't have default arguments
b) Nothing is displayed
c) "Hello World" is displayed
d) The program has an error display function doesn't have parameters

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

a) list
b) dictionary
c) tuple
d) struct

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

a) list
b) dictionary
c) tuple
d) struct

Group-B

(Short Answer Type Questions) 3 x 5=15

2. Describe the significance of indentation in Python. (3)
3. Describe the different numeric data types in Python. (3)
4. Explain the use of the if statement in Python. (3)
5. Discuss the functionality of the in operator in Python. (3)
6. Explain object orientation in python with example. (3)

OR

Explain the inheritance with the example of a python program. (3)

Group-C

(Long Answer Type Questions) 5 x 6=30

7. Discuss Length of string Indexing in strings counting substrings in a string the operations on list. (5)
8. What are identity operators and operator precedence? Explain with examples. (5)
9. Explain how read () and write () functions are used in Python. Give proper examples for both functions. (5)
10. Write a Python program to find reverse of given number using user defined function. (5)
11. Write a python program to implement Student class which has method to calculate CGPA. Assume suitable class variables. (5)
12. Choose the syntax for try, try....except and try....finally clauses and then explain all the clauses with proper example. (5)

OR

Demonstrate a Python program to implement recursion for factorial of a number that demonstrates the user defined function and return statement. (5)

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