

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST-3 EXAMINATION-2022

B.Tech-III Semester (CSE&IT)

COURSE CODE (CREDITS): 18B11CI314 (3)

MAX. MARKS: 35

COURSE NAME: PYTHON PROGRAMMING ESSENTIALS

COURSE INSTRUCTORS: Jagpreet, Aman, Naveen, Nishant

MAX. TIME: 2 Hours

Note: All questions are compulsory. Marks are indicated against each question in square brackets.

Q 1. Find the output of following python code:

[5 marks]

[CO 1-5]

(a)

```
def foo(x):
    x[0] = ['def']
    x[1] = ['abc']
    return id(x)
q = ['abc', 'def']
print(id(q) == foo(q))
```

(d)

```
class Demo:
    def __init__(self):
        self.a = 1
        self._b = 1
    def get(self):
        return self._b
obj = Demo()
obj.a=45
print(obj.a)
```

(b)

```
class A:
    def __init__(self):
        self._i = 1
        self.j = 5
    def display(self):
        print(self._i, self.j)
class B(A):
    def __init__(self):
        super().__init__()
        self._i = 2
        self.j = 7
c = B()
c.display()
```

(e)

```
def func (var1, var2, var3):
    if (var1 < var2):
        if (var1 > var2):
            if (var1 > var2):
                print(1)
            else:
                print(2)
        else:
            if (var1 < var2):
                print(3)
            else:
                print(4)
func(156, 210, 950)
```

(c)

```
a=False
while not a:
    try:
        f_n = input("Enter file name")
        l_f = open(f_n, 'r')
    except:
        print("Input file not found")
```

- Q 2. What is GUI Programming in python? Discuss about TK interface in python? Write a python code to create the below form with all functionalities of "submit button"? [1+1+3=5 Marks] [CO-6]

Srt.No	Subject	Grade	Sub Credit	Credit obtained
1	CS 201		4	
2	CS 202		4	
3	MA 201		3	
4	EC 201		4	

Total credit:
SGPA

Submit Button

- Q 3. Write a Python GUI program to create a Scrolled Text widgets using tkinter module? What are widgets in python and discuss both the widgets and their integration steps? [2+3=5 Marks] [CO-6]
- Q 4. Write a short note on File Handling in python? Given strings in a file "juit.txt", write a python program to check if the strings are valid email address or not. An email is a string (a subset of ASCII characters) separated into two parts by @ symbol, a "personal_info" and a domain, that is personal_info@domain. Also find and save personal_info and domain as output in "person.txt" and "domain.txt" files. [2+3=5 Marks] [CO-4]
- Q 5. (a) What do you mean by method overriding in python? Write python programs to override __getitem__(), __set__() methods and in operator. [2,3 Marks] [CO-2,3]
 (b) Given the Coordinates (x, y) of a center of a Circle and its radius, write Python program to determine whether the point lies inside the Circle, on the Circle or outside the Circle.
- Q 6. Write a python program to check a password as a combination of alphanumeric characters along with special characters, and checking whether the password is valid or not with the help of conditions. Primary conditions for password validation: [5 Marks] [CO-4]
- Minimum 8 characters.
 - The alphabet must be between [a-z]
 - At least one alphabet should be of Upper Case [A-Z]
 - At least 1 number or digit between [0-9].
 - At least 1 character from [_ or @ or \$].
- Q 7. (a) Write a short note on Python Errors and Built-in Exceptions? Write a code to demonstrate the concept of creating a Python Custom Exception and Raise the same? [2 Marks] [CO-4]
 (b) Consider a line "IP Address 192.16.72.6/24 login Sat Oct 23 09:14:16 2021" in the file "log.txt". Write a Python code to read the file and extract IP address from the lines starting from the word "IP Address" and save extracted data in "login.txt". [3 Marks] [CO-5]