

Jagmeet

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT  
TEST-3 EXAMINATION - December 2021

B. Tech III Semester

COURSE CODE: 18B11CI314

MAX. MARKS: 35

COURSE NAME: PYTHON PROGRAMMING ESSENTIALS

COURSE CREDITS: 3

MAX. TIME: 2 Hrs

*Note: All questions are compulsory. Carrying of mobile phone during examinations will be treated as case of unfair means.*

**Q1.** 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? **(CO-6) [2+3=5 Marks]**

**Q2.** Write a short note on File Handling in python? Python program to copy odd lines from "juit1.txt" to "juit2.txt". **(CO-4) [2+3=5 Marks]**

**Q3.** Write a program to show Instance Method, Class Method and Static Method in python. **(CO-5) [5 Marks]**

**Q4.** Why do you need regular expressions in Python? Consider a file "juit.txt". Write a Python program to read the file and look for lines of the form

**X-DSPAM-Confidence: 0.8475**

**X-DSPAM-Probability: 0.458**

Extract the number from each of the lines using a regular expression. Compute the average of the numbers and print out the average. **(CO-4) [2+3=5 Marks]**

**Q5.**

(a) What do you mean by method overriding in python? Write python programs to override `__getitem__()`, `__set__()` methods and in operator. **(CO-5) [3 Marks]**

(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. **(CO-3) [2 Marks]**

**Q6.** What is GUI Programming in python? Discuss about TK interface in python? Write a python code to create the below form with all functionalities? **(CO-6) [1+1+3=5 Marks]**

Sl.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

**Q7.**

(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? **(CO-4) [2 Marks]**

(b) Write Python code to create a function named `alter_rectangle()` that takes an object of Rectangle class inherited from Polygon class and two numbers named `alter_x` and `alter_y`. It should alter the location of the Rectangle by adding `alter_x` to the x coordinate of corner and adding `alter_y` to the y coordinate of corner. **(CO-5) [3 Marks]**