5 years Integrated M.Sc. (IT) / B.Sc. (IT) – Semester 5
Practical List
IT5013 – Introduction to Data Processing with Python

Instructions:

Implement programs in python v3.0 or above.

Practical No. 1	
Practical problem	1. Write a Python program to display "Python First Program". 2. Write a python program to display sum of two numbers. 3. Write a program in python to swap two number type variables without using temporary variable. 4. Write a program in python to find out maximum and minimum number out of three inputted number. 5. Write a python program to check inputted number is odd or even. 6. Write a Python program to check if the number provided by the user is an Armstrong number. 7. Write a python program to check whether the number is positive, negative or zero. 8. Write a python program to check if the number provided by the user is a palindrome or not. 9. Write a program in python to implement Fibonacci series up to user entered number. 10. Write a python program to find whether the given year is a leap year or not. 11. Write a program to implement factorial series up to user entered number. 12. Write a python program to convert decimal to binary, octal and hexadecimal. 13. Write a program to input marks of 5 subjects of a student and display the total marks scored, percentage scored and the class of result. Result criteria: Percentage >= 70% : distinction Percentage >= 60% and <70% : First class Percentage >=50% and < 60% : Second Class Percentage >=40% and < 50% : Pass Class Percentage < 40% : Fail 14. Write a python program to print sum of digit in number. Ex. N=123 then 1+2+3 = 6. 15. Write a python program to print sum of even numbers up to given N number. Ex. N = 7 then 2 + 4 + 6 = 12
Duration for completion	6 hours
Submission must contain	Code

Nature of submission	Handwritten
Reference for solving the problem	Book: Martelli, A., Python in a nutshell, O Reilly Web references: https://www.w3schools.com/python https://www.geeksforgeeks.org/getting-started-with-python-programming

Practical No. 2	**Enrollment No.**
Practical problem	1. write a python program to print following patterns: a. @ $ $ @ @ @ $ $ $ $ b. @ @ @ @ $ @ @ $ $ @ c. * 2. write a python program to print following patterns: a. 1 2 1 3 2 1 4 3 2 1 b. 1 1 1 1 1 0 0 0 0 1 1 1 0 0 1 c. *

Duration for completion	2 hours
Submission must contain	Code
Nature of submission	Handwritten
Reference for solving the problem	Book: Martelli, A., Python in a nutshell, O Reilly Web references: https://www.w3schools.com/python https://www.geeksforgeeks.org/getting-started-with-python-programming

Practical No. 3	**Enrollment No.**
Practical Problem	1. Write a python program to perform following operation of the list: a. Create a list of your favourite fruit. b. Print the first, third and last element of the list. c. Change the second element to a different fruit. d. Add a new fruit to the end of the list. e. Remove the fruit that you added at the end of the list. 2. Create a list of squares of numbers from 1 to 10 using list comprehension. 3. Take a list, say for example this one: A= [1,2,3,5,8,13,21,34,55,89] Consider above given list and performed following operation. a) Print all the elements of the list that are less than 5. b) Create a new list with number less than 5 from existing list and display existing all list elements in single line. c) Display all numbers from list, which are lesser than inputted number. 4. Write a python program to perform following operation of the tuple: a. Create a tuple containing the names of the days of the week. b. Print the first, third and last element of the tuple. c. Unpack a tuple of three element into three variables. 5. Write a function to calculate the sum and average of a tuple numbers. 6. Write a python program to print all the dictionary values in one line. Ex. {'no' : 1, 'name' : 'BMIIT', 'Course' : 'BSCIT'} Output: [1, 'BSCIT' , 'BMIIT']
Duration for completion	3 hours
Submission must contain	Code
Nature of submission	Handwritten
Reference for solving the problem	Book: Martelli, A., Python in a nutshell, O Reilly Web references: https://www.w3schools.com/python https://www.geeksforgeeks.org/getting-started-with-python-programming