

# B.E / B.Tech. PRACTICAL END SEMESTER EXAMINATIONS, JANUARY 2022

First Semester

## GE3171 & PROBLEM SOLVING AND PYTHON PROGRAMMING LABORATORY

(Regulations 2021)

Time : 3 Hours  
100

Answer any one Question

Max. Marks

(To be filled by the question paper setter)

Aim/Principle/Apparatus required/Procedure	Tabulation/Circuit/Program/Drawing	Calculation & Results	Viva-Voce	Record	Total
			10	10	100

1.	a) Write a Python program to generate Electricity Bill and develop a flow chart for the same.  b) Develop a Python program to find the Biggest of 3 numbers using nested if...else statement.
2.	a) An integer, n, is said to be perfect when the sum of all of the proper divisors of n is equal to n. For example, 28 is a perfect number because its proper divisors are 1, 2, 4, 7 and 14, and $1 + 2 + 4 + 7 + 14 = 28$ .  b) Develop a Python program to find whether the given number is Positive or Negative using if statement.
3.	a) Develop a Python program to read two numbers as input and Swap the Two Numbers (using three variables).  b) Develop a Python Program to read numerator and denominator and print their quotient and remainder.
4.	a) write a program that accepts the lengths of three sides of a triangle as input the program output should indicate whether or not the triangle ,is right triangle(recall from the Pythagorean theorem that in a right triangle ,the square of one side equals the sum of the squares of the other two sides).  b) Develop a Python program to find the sum of odd and even numbers using for statement.

5.	<p>a) Write a python program to get the 5 subjects marks and display the grade for the same.</p> <p>b) Develop a Python program to swap two numbers (using two variables).</p>
6.	<p>a) To write a python program to find the sum of first 'n' natural number.</p> <p>b) Write a Python program to select a random element from a list, set, dictionary (value) and a file from a directory. Use random.choice().</p>
7.	<p>a) write a program to create, concatenate and print a string and accessing sub-string from given string.</p> <p>b) Develop a Python program to check if the given string is palindrome or not.</p>
8.	<p>a) Write a Python program to get a single string from two given strings, separated by a space and swap the first two characters of each string. Sample input: 'abc', 'xyz'. Expected Result : 'xyc abz'.</p> <p>b) Develop a Python program to find the biggest of 3 numbers using nested if...else statement</p>
9.	<p>a) Code a Python program create a list from given list having number and its cube in each tuple.</p> <p>b) Read two strings. Print the common characters in both the strings and the count of them.</p>
10.	<p>a) Write a Python program to Find the Duplicate Element from a List.</p> <p>b) Code a Program to Python Find the 1st,2nd Largest Element in a List.</p>
11.	<p>a) Write a Python program to unpack a tuple in several variables and use + operations.</p> <p>b) Write a Python program to add an item in a tuple using looping.</p>
12.	<p>a) Code a Python Program to Find the Factorial of a Given Number Using Recursion.</p> <p>b) Write a Python program to find the first repeated word in a given string.</p>
13.	<p>a) Write a python program to remove duplicates from a list.</p> <p>b) Write a python program to perform linear search</p>
14.	<p>a) Code a Python program to accept a String , Reverse the String ,Check whether the string is a Palindrome and print the result.</p> <p>b) Write a Python program to Count the number of Vowels in a string.</p>
15.	<p>a) Write a Python program to Find Most Frequent Words in a Text read from a File.</p> <p>b) Write a Python program to find the Area of Shape.</p>

16.	<p>a) Write a program that Input a Text File. The program should print all of the unique words in the file in Alphabetical order.</p> <p>b) Develop a Python program to find the average of Three Numbers.</p>
17.	<p>a) Write a script named <b>copyfile.py</b>. This script should prompt the user for the names of two text files. the contents of the first file should be input and written to the second file.</p> <p>b) Develop a Python program to find the Sum of Digits in an Integer using While Statement by getting the input from the user.</p>
18.	<p>a) Develop a program for Voter's age validity. Validate using Exceptional handling feature in python. ( Ex: age of the voter is &gt; 18 or not).</p> <p>b) Write a Python program to convert a tuple to a string.</p>
19.	<p>a) Write a python class to reverse a string word by word.</p> <p>b) A prime number is an integer greater than one that is only divisible by one and itself. Write a function that determines whether or not its parameter is prime, returning True if it is, and False otherwise.</p>
20.	<p>a) Simulate Bouncing Ball Using Pygame</p> <p>b) Write a Python program to remove Duplicates from a list.</p>