DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE

Regular End Semester Examination – Summer 2022

Course: B. Tech.   **Branch : Electrical Engg**   **Semester :VIII**

Subject Code & Name: BTEEP801:5 The Joy Of Computing using Python

Max Marks: 60   **Date: 07/07/2022**   **Duration: 3.45 Hr.**

Instructions to the Students:
1. *All the questions are compulsory.*
2. *The level of question/expected answer as per OBE or the Course Outcome (CO) on which the question is based is mentioned in ( ) in front of the question.*
3. *Use of non-programmable scientific calculators is allowed.*
4. *Assume suitable data wherever necessary and mention it clearly.*

		(Level CO)	Marks

Q. 1   Solve Any Two of the following.

A)   Write a code to find the largest of three numbers.   **6**

B)   What is the difference between for loop and while loop? Write the syntax of for and while loop.   **6**

C)   Write a code which iterates from numbers 1 to 100, displays "fizz" if the number is divisible by a but not b, displays "buzz" if the number is divisible by b but not a, and displays "fizzbuzz" if the number is divisible by both a and b. a and b are inputs taken from the user.   **6**

Q.2   Solve Any Two of the following.

A)   Explain crowd computing with an example.   **6**

B)   Define the list and, using appropriate examples, perform any four operations on the list.   **6**

C)   Write code to determine whether the input year is a leap year or not.   **6**

Q. 3   Solve Any Two of the following.

A)   What is the magic square problem? Write an algorithm for the magic square of size 3.   **6**

B)   Write a program to define a function named printDict() that can print a dictionary where the keys are numbers between 1 and n (both included) and the values are squares of the keys. The function printDict() doesn't take any arguments. (where n is an integer number).   **6**

C)   What is bubble sorting? Using the bubble sort algorithm, sort the list [5,1,4,2,8].   **6**

Q.4   Solve Any Two of the following.

A)   What is recursion ? Write code for factorial of input number.   **6**

B)   What is difference between binary search and linear search?   **6**

C)   What is the dictionary in Python? Describe the functions of a dictionary. 1)get() 2) keys() 3)values() 4)items()   **6**

Q. 5   Solve Any Two of the following.

A)   Write a program that accepts a sequence of lines as input and prints the   **6**

lines after making all characters in the sentence capitalized.

B) What is the difference between list and tuples in Python? **6**

C) Write a program to generate a matrix having R rows and C columns **6**
such that all the numbers are in increasing order starting from 1 in a
row-wise manner. (Where R = 3 and C = 3, print the output).

*** End ***