**PROGRAMMING IN PYTHON LABORATORY**

**EXPERIMENTS:**

**Practical - Implementing real-time/technical applications using Lists, Tuples.**

1. Write a program that converts a list of characters into their corresponding ASCII values using map() function.
2. Write a program to calculate the sum of first 10 natural numbers using reduce() function.
3. Write a program using filter() function to filter out only even numbers from a list.
4. Make a list of 5 random numbers.
5. Use list comprehension to construct the following lists
   1. [‘1a’, ‘2a’, ’3a’, ’4a’]
   2. [‘ab’, ‘ac’, ‘ad’, ‘bb’, ‘bc’, ‘bd’]
   3. [‘ab’, ‘ad’, ‘bc’], from the list created above.
   4. Multiples of 10
6. Make a list of first ten letters of the alphabet, then using the slice operation do the following operations:
   1. Print the first three letters from the list
   2. Print any three letters from the middle
   3. Print the letters from any particular index to the end of the list
7. Write a program that creates a list [‘a’, ‘b’, ‘c’] then create a tuple from that list. Now create a tuple (‘a’, ’b’, ’c’) and then create a list from it.
8. Write a program that prompts the user to enter an alphabet. Print all the words in the list that starts with that alphabet.
9. Write a program that prints all the consonants in a string using list comprehension.
10. Write a program to make a quiz. Use zip() function to extract question into and answer into two separate lists.

**Practical - Implementing real-time/technical applications using Sets, Dictionaries.**

1. Create a dictionary of products purchased and their MRP’s. Calculate the bill and display to the customer.
2. Write a program that has a dictionary of your friend’s name as keys and their birthdays. Print the items in the dictionary in sorted order. Prompt the user to enter a name and check if it is present in the dictionary. If the name does not exist, then ask the user to enter DOB. Add the details in the dictionary.
3. Write a program that displays information about an employee. Use nested dictionary to do the task.
4. Write a program to remove duplicates from a dictionary.