

**Dhirubhai Ambani Institute of Information & Communication Technology**  
**First In Semester Examination, Autumn Semester 2017-2018**

**Course Title** IT110 Introduction to Programming Lab  
**Date** 23<sup>rd</sup> Oct 2017

**Max Marks** 20  
**Time** 120 mins

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**Group 2**

**For each of the problems given below write C program. You need to submit 6 files in total, 3 program files (\*.c files) and 3 files for captured input & output (text files)**

For Problem 1: EnrollmentNo\_Problem1.c (e.g. 201701500\_Problem1.c) and captured output as EnrollmentNo\_Problem1.txt (e.g. 201701500\_Problem1.txt)

Similarly for Problem 2 and Problem 3, submit C program files and captured output files.

**Q1 – 5 marks**

Write a program to read an integer value from user continuously until user enters 0 (zero). For each entered value you must check if the value is divisible by 3, 5 or 7 and display the appropriate message.

**Q2 – 5 marks**

Write a program to find sum of the series below:

$$1 - \frac{x}{1} + \frac{x^2}{2} - \frac{x^3}{3} + \dots + \frac{x^n}{n} \text{ Where } n \text{ is provided by user}$$

**Q3 – 10 marks**

In a user entered string, count the frequency of each character and delete the character with highest frequency. If two characters have same frequency you can choose any one character to be deleted.

e.g. User Input: "hippopotamus" → p has highest frequency of 3 so delete all 'p' from string, hence your output string will be "hiootamus"