UNITED INTERNATIONAL **UNIVERSITY (UIU)**
Dept. Of Electrical & Electronic Engineering (EEE)
Exam: Midterm, Trimester: Summer, Year: 2021
Course: EEE 2402 (Sec –A), Title: Structured Programming Lab
Marks: 30, Time: 30 minutes

Name: ID:

There are six questions. Answer 1, 2 and 3 if your ID is even. Answer 4, 5 and 6 if your ID is odd.

1. Write a program in C asking the user to enter 2 digit number, then prints the English word for it. Suppose you enter '52' the printf function prints out 'fifty-two'. Use switch statement for this purpose. [10]

2. Write a C program to find the value of n_{P_r}, where *n* and *r* are taken from keyboard. [10]

3. Take 1 and 50 from keyboard as the input and write a C program to check if any number between 1 and 50 is even or not. Display the even number. Also, determine and print the **sum** of all even numbers between 1 and 50 using a for loop. [10]

4. Write a program in C which finds the sum of the series using for loop: $1^4 + 2^4 + 3^4 + \ldots\ldots\ldots + n^4$, n taking from the keyboard. You are not allowed to use algebraic summation law. [10]

5. Write a C program which gives the solution of a quadratic equation, using the following formula: [10]

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

You must find any kind of roots (either real or imaginary). In case of imaginary roots ,the roots should be of the form c+id and c- id. Keep the option that when one enter a = 0 as input, it prints: This is not a quadratic equation.

6. Write a program to generate all combinations of 4, 5 and 6 using for loop. [10]