**Department of Computer Science**

National University of Computer and Emerging Sciences

Lahore Campus

**Digital Logic Design**

**EE1005**

**Section 2A,2B,2N**

**Assignment 2**

**Due Date 19th March 2022 Before 11:59 PM**

**Submit handwritten PDF document in Google Classroom and also submit hardcopy in class.**

**No late submissions are allowed.**

**Question 1**

Simplify following combinational circuits using Boolean algebra identities and rules.

**Note: Show all steps of simplification and mention which the laws used for simplification in each step.(5+5+5) 15 marks**

1. AB’C(BD + CDE) + AC’
2. AB’C + A’BC + A’ B’C
3. BCDE + BC(DE)’ + (BC)’DE

Draw both circuits and calculate gate input cost before and after simplification.

**Solve following questions from exercise of Book Morris Mano 5th edition:**

**2.1 (c) 5 marks**

**2.2 (d) 5 marks**

**2.3 (b)(c) 10 marks**

**2.6 (b)(d) 10 marks**

**2.7 20 marks**

**2.12 15 marks**

**2.14 (d) 5 marks**

**2.15 (c) 5 marks**

**2.17 10 marks**

**2.18 (c) 5 marks**

**2.19(a) 5 marks**

**2.20(c) 5 marks**

**2.22(c) 5 marks**

**2.23 (b) 5 marks**

**2.24 (c) 5 marks**

**2.26(b) 5 marks**