

**University of Engineering and Technology, Lahore**  
**Department of Electrical Engineering**

**EE272 – Digital Systems**  
**Homework 3**

**Issue Date:** 03 Sep 2019 (Thu)  
**Due Date:** 07 Oct 2019 (Mon - 2pm)

**\*\*\* you need to do the homework by hand. \*\*\***

**Please note late submission will be graded zero, no relaxation in submission for anyone.**

1. Find out the logic function **G** (using SOP) and **G'** (using POS).

Draw *logic circuit* for both cases.

AB \ CD	00	01	11	10
00	0	0	1	1
01	0	0	1	X
11	0	0	0	1
10	0	1	0	1

$$G'(A, B, C, D) =$$

$$G(A, B, C, D) =$$

2. Find the value of **F**.

$$F(A, B, C, D, E, F) = \sum (m_0, m_2, m_8, m_9, m_{10}, m_{12}, m_{13}, m_{16}, m_{18}, m_{24}, m_{25}, m_{26}, m_{29}, m_{31}, m_{32}, m_{34}, m_{35}, m_{39}, m_{40}, m_{42}, m_{43}, m_{47}, m_{48}, m_{50}, m_{56}, m_{58}, m_{61}, m_{63})$$

$$F=?$$