National University of Computer and Emerging Sciences, Lahore Campus

Course:	DLD Lab	Course Code:	EL227
Program:	BS (Computer Science)	Semester:	Spring 2017
Duration:	50 minutes	Total Marks:	50
Date	26-03-18	Weight	25%
Section:	B2 (A)	Pages:	2

Mid Term Exam

NAME: _____   Roll #:_____

Problem Statement: Implement the following Boolean functions using 3x8 Decoder and external gates.

$$F1 = y'z + xz$$
$$F2 = xy'z' + x'y + x'y(z + z')$$

a. Draw the truth table for above problem statement.   **[10 Point]**

A	B	C	F1	F2
0	0	0		

0	**0**	**1**		
0	**1**	**0**		
0	**1**	**1**		
1	**0**	**0**		
1	**0**	**1**		
1	**1**	**0**		
1	**1**	**1**		

b. Implement the complete circuit on LogicWorks Tool using 3x8 Decoder and 2-input external gates. **(Note: Use as minimum no. of logic gates as possible)**   **[15 Points]**

c. Implement the circuit of part (b) on the trainer board and verify the results. **(Note: Use as minimum no. of logic gates as possible)**   **[25 Points]**