COMSATS University Islamabad (CUI), Lahore Campus
Department of Electrical & Computer Engineering

Lab Assignment

Name: _____   Registration No: _____

Class:	**SP23-BCS-A**	**Marks: 10**
Subject:	**Digital Logic Design**	**Due Date: 12-10-2023**
Instructor:	**Sarmad Hassan**	

INSTRUCTIONS

- **Do all the necessary workings and attach it with answer sheet.**
- **No marks will be given without complete working and complete simulation window screenshot.**
- **Add the screenshot of complete window, half/cropped screenshot is not acceptable.**
- **Copied assignments will be marked as zero.**

Question: 1

A. *Design a logic circuit having 3 inputs, A, B, C will have its output HIGH only when a majority of the inputs are HIGH.*

B. **Design a logic circuit based on the criteria given below:**
Car alarm will sound when car Alarm is activated **and** either Car is shaken or car lock open with key or someone tries to start the car when doors are locked
Use the following notations:

A= Alarm Activated
B= Car Shake
C = lock Open with key
D= Car starts when doors are locked.

C. **Implement the designed circuit in part A and B on proteus to verify the outputs.**