



AMERICAN INTERNATIONAL UNIVERSITY – BANGLADESH
Faculty of Engineering

Course Name: Digital Logic and Circuits

Deadline: 15/10/2023(Class time)

Semester: Fall 2023-24

Term: Mid

Assignment: 01

Total Marks: 10

Question Mapping with Course Outcomes:

Item	COs	POIs	K	P	A	Marks	Obtained Marks
Q1	CO1	P.a.2.C3	K2			10	
Total:						10	

Student Information:

Student Name:

Student ID:

Section:

Department:

Submission Instruction:

- Do not copy from others.
- Please print this page and write your answer in this page (Extra paper is not allowed)
- Write your **Name, ID, Subject & Section** properly
- **Last Date of Submission : 15.10.2023 (Class Time)**

1. Design a system that can be used in a safety push button lock device. There will be two switches. If the value of A is greater than B or A is equal to B, lock mechanism opens. In any other case the lock mechanism remains closed. Let's say X is the lock mechanism, construct a truth table of the system and design the logic circuit for the system using magnitude comparator block diagram and necessary gate/s. [10]