

## Appendix 2

### Lab Sheet

Worksheet for automation of chosen industrial task.

Serial No.	Question	Student response	Instructor Approval and remarks for marking after submission.
1	List and demonstrate the correct type of actuators on your hardware board	<i>Single acting cylinder</i> <i>Double acting cylinder</i>	
2	List and demonstrate the correct type of sensors on your hardware board	<i>Distance comparator</i> <ul style="list-style-type: none"><li>➤ Buck down voltage regulator</li><li>➤ Ultrasonic distance sensor (HCSR04) *2</li><li>➤ Arduino Uno</li><li>➤ NPN Transistor (S8050) *3 (code in Distance_Comparator_Code)</li></ul> <i>Relay 1P2T *3</i>	
3	List and demonstrate the correct type of valves on your hardware board	<i>Solenoid actuated valve 3/2</i> <i>Solenoid actuated valve 5/3</i>	
4	Demonstrate the correct functioning of the circuit on hardware.		