**LIST OF FIGURES**

**Figures Page**

* 1. Block Diagram of Robotic Arm Control System 2

2.1. Block Diagram of 8051 Microcontroller based Pick and Place

Robot 6

2.2. Block Diagram of Zigbee based Transmitter Section 7

2.3 Block Diagram of Zigbee based Transmitter Section 8

3.1. Arduino Mega 2560 11

3.2. Pin Configuration Diagram of ATmega2560 12

3.3. Bluetooth Module HC-06 15

3.4. Pin Diagram of HC-06 Bluetooth Module 17

3.5. 3V-6V Dual Shaft DC Gear Motor 18

3.6. L298N Motor Driver 20

3.7. Pin Diagram of L298N Motor Driver 21

3.8. Servo Motor 22

3.9. CA 2596 Step Down (DC-DC) Converter 23

3.10. Arduino IDE Software 24

3.11. Button Bar of Arduino IDE 24

4.1. Overall Circuit Diagram of the System 25

4.2. Overall Flow Chart of the System 28

4.3. UI of the Application of the Robotic Arm Control System 29

4.4. MIT App Invertor Website 29

4.5. Designer Section of MIT App Invertor 30

4.6. Block Section of MIT App Invertor 31

4.7. Building Bluetooth Application 31

4.8. Compiling Bluetooth Application 32

4.9. Downloading Bluetooth Application 32

5.1. Hardware Design of Robotic Arm Control System 34

5.2. Commands of Phone Controlled Robot 35

5.3. Experimental Result for Turning Left Direction 35

5.4. Experimental Result for Turning Right Direction 36

5.5. Experimental Result for Upward Movement 36

5.6. Experimental Result for Downward Movement 37

5.7. Experimental Result for Turning Left with object 37

5.8. Experimental Result for Turning Right with object 38