LIST OF TABLES

Table-1.1 Comparison between IR and RF communication media

Table-1.2 Comparison for different wireless RF modules

Table-3.1 Comparison for different microcontrollers

Table-3.2 Pin Description of Temperature/humidity sensor

Table-3.3 Data Format for temperature/humidity sensor

Table-3.4 Brief description of components used to develop the system

Table- 4.1 Humidity and temperature values from standard instrument and sensor

Table-4.2 Relation between resistance values of LDR with % illuminance level

Table- 4.3 Relation between Lux and LDR % illuminance level

Table-4.4 Relation between firing angle and Vr.m.s

Table-4.5 Power consumption by bulb, heater and exhaust fan w.r.t dimming levels

Table- 6.1 Tuning parameters for heater with PID controller

Table- 6.2 Transient response for heater with PID controller

Table- 6.3 Tuning parameters for heater with GA-PID controller

Table- 6.4 Transient response for heater with GA-PID controller

Table- 6.5 Tuning parameters for heater with PSO-PID controller

Table- 6.6 Transient response for heater with PSO-PID controller

Table: 6.7 Power consumption for heater to maintain temperature at 30^0C with initial temperature 29^0C using PID, GA-PID and PSO-PID

Table-6.8 Percentage Power saving w.r.t conventional heater

Table- 6.9 Tuning parameters for bulb with PID controller

Table- 6.10 Transient response for bulb with PID controller

Table- 6.11 Tuning parameters for bulb with GA-PID controller

Table- 6.12 Transient response for bulb with GA-PID controller

Table- 6.13 Tuning parameters for bulb with PSO-PID controller

Table- 6.14 Transient response for bulb with PSO-PID controller

Table-6.15 Power consumption for 100W Bulb to maintain light Intensity at 200lux or 80% LDR value with initial 20% intensity using PID, GA-PID and PSO-PID.
Table-6.16 Percentage Power saving w.r.t conventional bulb (100W) for the four hours of experiment
Table- 6.17 Tuning parameters for exhaust fan with PID controller
Table- 6.18 Transient response for exhaust fan with PID controller
Table- 6.19Tuning parameters for exhaust fan with GA-PID controller
Table- 6.20 Transient response for exhaust fan with GA-PID controller
Table- 6.21 Tuning parameters for exhaust fan with PSO-PID controller
Table- 6.22 Transient response for exhaust fan with PSO-PID controller
Table-6.23 Power consumption for 18 W exhaust fan to maintain humidity at 42% using PID, GA-PID and PSO-PID
Table-6.24 Percentage Power saving w.r.t conventional exhaust fan (18 W) for four hours of experiment
Table-6.25 Cost analysis for remote control
Table-6.26 Cost analysis of receiver section
Table-6.27 Current consumption analysis for remote control
Table-6.28 Current consumption analysis for receiver section