# CHAPTER FIVE

# CONCLUSION & RECOMMENDATIONS

## Conclusion:

In this research, a UAV based Navigation, Guidance and Control autopilot system modeled and implemented, the system has been constructed with all necessary components, implemented and successfully tested. The autopilot gives the UAV the ability to fly autonomously.

A ground control station used to control and supervise the UAV in automatic control through nested PID control structure developed to stabilize and control the aircraft. Two algorithms were built on the autopilot. One is for the Altitude Tracker and the second is for the Waypoint Navigation script to execute the navigation commands uploaded to the autopilot by the user. The UAV also can accept manual operation. The system built from inexpensive available parts and components. Windows based Software used to perform as a ground station and used for simulation purposes.

## Recommendations:

This system can be produced in large scale and finely tuned for directed to many different applications.

Nested PID control loop should be replaced by other advanced and intelligent control mixtures.