# CONCLUSION AND FUTURE SCOPE

In this thesis, electrically conducting nanofluid flow in presence of magnetic field is investigated. In study of one dimensional nanofluid flow, governing systems of partial differential equations are obtained and system of dimensionless differential equations are derived using a similarity transformation. The subsequent systems of dimensionless differential equations are solved analytically (in case of one dimensional fluid flow) or approximately using homotopy analysis method (in case of two or three dimensional flow). The Numerical results are studied and depicted graphically for the effect of pertinent parameter conditions.

Study revealed that vulnerability of nanofluids to the stimulus of magnetic field is exceptionally high compared to conventional fluid. Nanofluids may be advantageous over conventional fluids in industries and engineering processes, as decrease in the velocity and increase in the temperature with increase in the nanoparticle volume fraction is observed.

This study can be useful in understanding effects of magnetic field on human health, by studying blood flow. Further, heat transfer properties of the nanofluid may be enhanced by suspension of two different types of nanoparticles in base fluid, known as hybrid nanofluid.