**ABSTRACT**

In this study, we investigate the effect of magnetic field on steady boundary layer flow along with heat and mass transfer over a flat porous plate with slip boundary condition at the boundary in a porous medium using shooting method with fourth order Runge-Kutta Method. The velocity, temperature and concentration distribution are calculated for different governing parameters. The effect of various non-dimensional parameters like magnetic parameter (M), Schmidt number (𝑆𝑐), Soret number (𝑆𝑟), Suction/blowing parameter (𝑆)are investigated with the aid of graphs. The effect of these dimensionless parameters skin-friction, rate of heat and mass transfer are discussed in detail to understand the physical aspects of the solutions