

MAGNETIC EFFECTS OF MASS AND HEAT TRANSFER ON FREE CONVECTION FLOW THROUGH POROUS MEDIUM PAST AN INFINITE VERTICAL PLATE IN SLIP – FLOW REGIME IN THE PRESENCE OF CHEMICAL REACTION, VARIABLE SUCTION AND PERIODIC TEMPERATURE AND MASS CONCENTRATION

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ABSTRACT

Free convection MHD flow of a viscous incompressible fluid flow through porous medium with mass and heat transfer past an infinite vertical plate in slip –flow regime in the presence of variable suction and periodic temperature and mass concentration has been studied. Assuming variable suction at the plate, approximate solutions are obtained for velocity, temperature, concentration, Nusselt number, Sherwood number and skin friction. The result of various material parameters are discussed on flow variable and presented by graphs and tables.

KEYWORDS: Vertical Plate, Heat and Mass Transfer, Porous Medium, Slip-Flow Regime, Chemical Reaction, Free Convection, Variable Suction and MHD