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| Abstract |  |
| Effect of exothermic chemical reaction on an unsteady natural convection heat and mass transfer boundary layer flow past a flat porous plate is investigated. The effect of Arrhenius activation energy on the velocity, temperature, and concentration are also studied in this paper. The governing partial differential equations are reduced to ordinary differential equations by introducing locally similarity transformation (Maleque [9]). Numerical solutions to the reduced nonlinear similarity equations are then obtained by adopting Runge-Kutta and shooting methods by using the Nachtsheim and Swigert iteration technique. The results of the numerical solution are then presented graphically in the form of velocity, temperature, and concentration profiles. The corresponding skin friction coefficient, the Nusselt number, and the Sherwood number are also calculated and displayed in a table showing the effects of various parameters on them. | |