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Md. Khairul Bashar (bd_kairul@yahoo.com), Senior officer, Sonali Bank, Cox's Bazar, Chittagong , Bangladesh, and **Rasel Biswas*** (rb3247@mun.ca), Department of Mathematics and Statistics, Memorial University, St. John's, NL A1C5S7, Canada. *Effects of pressure stress work and viscous dissipation in mixed convection flow along a vertical flat plate in presence of heat generation.*

The effects of viscous dissipation and pressure work in mixed convection flow along a vertical flat plate in presence of heat generation have been investigated. The results is obtained by transforming the governing system of boundary layer equations into a system of non-dimensional equations and by applying the implicit finite difference method along with Newton's linearization approximation. Numerical results for different values of the heat generation parameter, viscous dissipation parameter, pressure stress work parameter with Prandtl number 0.72 which corresponds to air at 250°K have been obtained. The velocity profiles, temperature distributions, skin friction coefficient, and the rate of heat transfer have been presented graphically for the effects of the abovementioned parameters in presence of heat generation. (Received May 20, 2011)