A variational-fixed point iterative technique for the solution of second order differential equations

ABSTRACT

In this paper, we propose a variational-fixed point iteration technique for the solution of second order linear differential equations with two-point boundary value problems. The proposed method is endowed with the Galerkin method for the determination of the starting function. The numerical results show the validity and efficiency of the proposed method in comparison with the exact solution and other existing methods.

Keyword: Variational iteration method; Galerkin method; Fixed point iteration method; Differential equation