In chemical engineering, deflection of beams and other area of engineering the two point boundary value problems with Neumann and mixed Robin's boundary conditions have great importance. It is not easy task to solve numerically such type of problems. In this study a B-spline finite element has been introduced to get the solution of two point boundary value problem. Some test examples are considered for the applicability of the purposed scheme. Further the results are compared with simple Galerkin-finite element method and with the exact solution of the problems. Throughout the discussion, it is observed that the proposed technique is performing well.
A Comparative Study of Galerkin Finite Element and B-Spline Methods for Two Point Boundary Value Problems


**Index Terms**

Computer Science

Algorithms

**Keywords**

Finite Element Method  B-Spline  Dirichlet's boundary conditions  Mixed
Robbin's Boundary Conditions