1043-47-109 **Hradyesh Kumar Mishra*** (hkm@mnnit.ac.in), Department of Mathematics, SPMIT, Bhiti Mahgaon, G.T. Road, Kaushambi (U.P), India, and **Manoj Kumar** (manoj@mnnit.ac.in), Department of Mathematics, Motilal Nehru National Institute Technology, Allahabad (U.P), 211004, India. *An Initial-Value Approach for Second-Order Singularly Perturbed Boundary Value Problems.*

We consider a second-order singularly perturbed boundary value problem of the form

$$\epsilon y''(x) + f(x)y'(x) + g(x)y(x) = h(x),\ x \in [a, b].$$

An initial-value approach is presented for this second-order singularly perturbed boundary value problems with a boundary layer at one end (left or right) point. This method is based on the boundary layer behavior of the solution. Here, we replace the original problem by two suitable initial value problems. Several linear and non-linear examples have been solved to demonstrate the applicability of the method. Graphs are also plotted for numerical results. (Received August 22, 2008)