NONNEGATIVE SOLUTIONS FOR BOUNDARY VALUE PROBLEM

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Abstract. We establish what conditions require for nonlinear integral equation

$$u(x) = g(x) + \int_0^h k(x,s) f(s, u(s)) ds, \quad x \in [0,h]$$

to have at least one nonnegative solution, then we apply this result to the boundary value problem.

MSC: 47H10, 30E25.

Keywords: Nonnegative solution, nonlinear Fredholm integral equation, Krasnoselskii's fixed point theorem, nonlinear boundary value problem.