

Abstract

We present in this paper new results concerning positive solution for the fourth order four-point weighted $p(t)$ -Laplacian like boundary value problem where $\mathbb{R}^+ = [0, +\infty)$, $\varphi(t, x) = |x|^{p(t)-2}x$, $\alpha \in [0, 1[$, $\eta, \gamma \in (0, 1)$, $\beta \geq 0$, $p \in C([0, 1], (1, +\infty))$, $f \in C([0, 1] \times \mathbb{R}^+, \mathbb{R}^+)$, $a \in C((0, 1), (0, +\infty))$, and $b: (0, 1) \rightarrow \mathbb{R}^+$ is a measurable function such that $b(t) \geq 0$ for a.e. $t \in (0, 1)$ and b is positive in a subset of a positive measure.