Abstract

Almost Linear Differential Equations

Roman Koplatadze

Consider differential equation

$$u^{(n)}(t) + p(t)\big|u(\sigma(t))\big|^{\mu(t)} \operatorname{sign} u(\sigma(t)) = 0, \qquad (1)$$

where $p \in L_{\mathrm{loc}}(R_+; R)$, $\sigma \in C(R_+; R_+)$, $\lim\limits_{t \to +\infty} \sigma(t) = +\infty$, $\mu \in C(R_+; (0, +\infty))$ and $\lim\limits_{t \to +\infty} \mu(t) = 1$.

Sufficient (necessary and sufficient) conditions for a almost linear differential equation (1) to have Property **A** or **B** are established.