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COMPARISON THEOREMS FOR DEVIATED DIFFERENTIAL EQUATIONS

Consider the equations

$$u^{(n)}(t) + \sum_{i=1}^{m} p_i(t)u(\tau_i(t)) = 0, \tag{1}$$

$$v^{(n)}(t) + \sum_{i=1}^{k} q_i(t)v(\sigma_i(t)) = 0, \tag{2}$$

where $m, k \in N$, $n \geq 2$, $p_i \in L_{loc}(R_+; R)$ $(i = 1, \ldots, m)$, $q_i \in L_{loc}(R_+; R)$ $(i = 1, \ldots, k)$, $\tau_i \in C(R_+; R_+)$, $\lim\limits_{t\to+\infty} \tau_i(t) = +\infty$ $(i = 1, \ldots, m)$, $\sigma_i \in C(R_+; R_+)$, $\lim\limits_{t\to+\infty} \sigma_i(t) = +\infty$ $(i = 1, \ldots, k)$. Comparison theorems of new type are established for the equations (1), (2) which enable one to obtain sufficient conditions for the equations (1) to have properties A and B.