

# On the Positive Solutions of Discrete Equations in Infinite Interval

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The following difference equation

$$\Delta u(k) + \sum_{i=1}^m p_i(k)u(\tau_i(k)) = 0,$$

are considered, where

$\Delta u(k) = u(k + 1) - u(k)$ ,  $p_i: N \rightarrow R_+$ ,  $\tau_i: N \rightarrow N$ ,  $\tau_i(k) \leq k - 1$  for  $k \in N$  and

$$\lim_{k \rightarrow +\infty} \tau_i(k) = +\infty, \quad (i = 1, \dots, m).$$

In the work sufficient conditions are established for all solutions of the above equation to be oscillatory.