Meeting: 1004, Bowling Green, Kentucky, SS 3A, Special Session on Dynamic Equations on Time Scales and Applications

1004-34-251 **Bonita A Lawrence*** (lawrence@marshall.edu), Marshall University, Department of Mathematics, One John Marshall Drive, Huntington, WV 25755-2560. *Existence results for even ordered multipoint boundary value problems on a time scale.* Preliminary report.

An application of the Krasnosel'skii-Zabreiko offers us the existence of nontrivial solutions to the second order boundary value problem

$$y^{\Delta\Delta} + f(y^{\sigma}) = 0$$

with three point boundary conditions

$$\begin{aligned} y(0) &= 0, \\ y(p) - y(\sigma(1)) &= 0, \end{aligned}$$

defined on a time scale $\mathbb{T}$ such that $t \in \mathbb{T} \cap [0,1]$ and $0 < p < 1$. The goal of this work is to obtain a similar result for multi-point problems and higher order problems. (Received January 25, 2005)