

1128-39-109

**M N Islam\*** (mislam1@dayton.edu), Department of Mathematics, University of Dayton, Dayton, OH 45458, and **J T Neugebauer**. *Asymptotically P-Periodic Solutions of a Quantum Volterra Integral Equation*. Preliminary report.

**Abstract.** In this paper, we study the existence of an asymptotically periodic solution of a Volterra integral equation on the time scale  $q^{N_0}$ , which we call a quantum Volterra integral equation. In the process, we study the existence of periodic solutions of an associated equation on the time scale  $q^{\mathbb{Z}}$ , which is an extension of  $q^{N_0}$ . We employ Schauder's fixed point theorem in the analysis. (Received February 18, 2017)