

**BULLETIN OF THE
ALLAHABAD MATHEMATICAL SOCIETY**

Vol. 26, Part 1, 2011

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Abstract: In this paper, we introduce the concept of Ω -closed set of a given L -topological space X and a prime fuzzy set $\Omega \in L^X$, in the framework of generalization of closeness in L -topological spaces. As applications of this notion, we present and investigate some properties of Ω -regular generalized closed set, Ω -regular semi closed set, Ω -regular strongly semi closed set. Characterizations of Ω -regular generalized extremely disconnected L -topological spaces via various kinds of Ω -generalized closed sets are given.

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$$\Delta^m \left[x(n) + cx(\tau(n)) \right] + q(n)f(x(\sigma(n))) = 0, \quad n \geq n_0$$

Sufficient conditions are established for the existence of positive solutions and for oscillation of bounded solutions of the above equation. Combination of these conditions provides necessary and sufficient conditions for oscillation of bounded solutions of the equation. Further, the results are generalized to equations in which c is a sequence $c(n)$ and a certain type of a forcing term is present.

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Swati Khare, O. P. Misra and Joydip Dhar

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Joginder S. Dhiman, M. G. Gorla and Tej Singh

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Alfred Olufemi Bosede

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