1116-39-1855 **Turhan Koprubasi*** (tkoprubasi@kastamonu.edu.tr), 1325 Waterford Oak Drive #305, Orlando, FL 32828. *SPECTRAL PROPERTIES OF DISCRETE STURM-LIOUVILLE EQUATION WITH QUADRATIC EIGENPARAMETER IN BOUNDARY CONDITION.*

Let the boundary value problem,

$$a_{n-1}y_{n-1} + b_n y_n + a_n y_{n+1} = \lambda y_n \ , \ n \in \mathbb{N},$$

$$(\gamma_0 + \gamma_1\lambda + \gamma_2\lambda^2)y_1 + (\beta_0 + \beta_1\lambda + \beta_2\lambda^2)y_0 = 0,$$

is considered where (a_n), (b_n) are complex sequences for $n \in \mathbb{N}$, γ_i, $\beta_i \in \mathbb{C}$ for $i = 0, 1, 2$ and λ is a eigenparameter. In this study, several spectral properties of the above boundary value problem as Jost solution, Jost function, eigenvalues and spectral singularities are mentioned for the condition

$$\sup_{n\in\mathbb{N}} \left[\exp(\varepsilon n^{\delta}) \left(|1 - a_n| + |b_n|\right)\right] < \infty,$$

where $\varepsilon > 0$ and $\frac{1}{2} \leq \delta \leq 1$. (Received September 21, 2015)