1100-16-80 **Mashhoor Refai*** (m.refai@psut.edu.jo), Khalil Al-Saket st., Al Jubaiha, Amman, Amman 11941, Jordan. *On Strongly Graded Prime Submodules.*

Let G be a group with identity e. A ring R is said to be $G-$graded if there exist additive subgroups R_g of R such that $R = \bigoplus_{g\in G} R_g$ and $R_g R_h \subseteq R_{gh}$, for all $g, h \in G$. A $G-$graded ring R is denoted by (R, G). A $G-$graded ring R is said to be strongly graded if $R_g R_h = R_{gh}$, for all $g, h \in G$, or equivalently if $1 \in R_g R_{g^{-1}}$, for all $g \in G$. A $G-$graded $R-$module M is said to be strongly graded if $R_g M_h = M_{gh}$, for all $g, h \in G$. Let N be an $R-$submodule of M. Then N is called a $G-gr-R-$submodule of M if $N = \bigoplus_{g\in G}(N \cap M_g)$.

In this paper, we introduce the concept of strongly graded prime submodules, and prove that "N is strongly graded prime if and only if N_e is strongly prime R_e-submodule of M_e". Also, we prove that "N_e is strongly prime R_e-submodule of M_e if and only if N_g is strongly prime R_e-submodule of M_g, for all $g \in G$". A survey of my contribution to the field will also be given. (Received January 30, 2014)