

1102-13-23

Najat M. Muthana* (nmuthana@kau.edu.sa), P.O.Box1859, Jeddah, 21441, Saudi Arabia. *On generalized Jordan triple (α, β) -derivations of rings.*

Let R be a ring and I be a nonzero ideal of R . Suppose that α, β be endomorphisms of R . An additive mapping $d : R \rightarrow R$ is said to be a Jordan triple (α, β) -derivation if $d(xy) = d(x)\alpha(y) + \beta(x)d(y)\alpha(x) + \beta(xy)d(x)$ holds for all $x, y \in R$. An additive mapping $F : R \rightarrow R$ is called a generalized Jordan triple (α, β) -derivation if there exists a Jordan triple (α, β) -derivation $d : R \rightarrow R$ such that $F(xy) = F(x)\alpha(y) + \beta(x)d(y)\alpha(x) + \beta(xy)d(x)$, holds for all $x, y \in R$. In the present paper, we study Jordan triple (α, β) -derivation, generalized Jordan triple (α, β) -derivation on prime rings and find the necessary and sufficient conditions under which any Jordan triple (α, β) -derivation (resp. generalized Jordan triple (α, β) -derivation) becomes an (α, β) -derivation on I (resp. a generalized (α, β) -derivation on I). (Received June 22, 2014)