On small injectivity

ABSTRACT

A right ideal S of a ring R is called small if for a right ideal H of R with $H + S = R$, it implies that $H = R$. A right R-module M is defined to be small injective if every R-homomorphism from a small right ideal to M can be extended to a R-homomorphism from R to M and a ring R is called right small injective, if R is small injective as a right R-module. Some properties of small injective modules and rings will be shown obtained. We will obtain some characterizations of PF and QF-rings using this concept.