

ON MODULES WITH RESTRICTED CLASS OF INJECTIVITY DOMAINS

Ergül Türkmen, Burcu Nişancı Türkmen, and Yılmaz Mehmet Demirci

ABSTRACT. Let R be a ring with identity and M be a left R -module. The injectivity domain of module M is denoted by $Jn^{-1}(M)$ and the projectivity domain of a module M is denoted by $Br^{-1}(M)$. A module M is *injective* (respectively, *projective*) if and only if $Jn^{-1}(M) = R - Mod$ (respectively, $Br^{-1}(M) = R - Mod$). The class properties of these domains are studied intensely by many authors. $Jn^{-1}(M)$ and $Br^{-1}(M)$ contain the class of semisimple modules. A module is called a *poor module* (respectively, a *p-poor module*), if $Jn^{-1}(M) = SSR$ (respectively, $Br^{-1}(M) = SSR$) such that every class of semisimple modules is denoted by SSR . Some characterizations of special rings are obtained under favour of these modules.

In this study, we define *radical-poor modules* and investigate some properties of these modules.

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Amasya University, Faculty of Art and Science, 05100
Ipekkoy, Amasya, Turkey
ergulturkmen@hotmail.com

Amasya University, Faculty of Art and Science, 05100
Ipekkoy, Amasya, Turkey
burcunisancie@hotmail.com

Sinop University, Faculty of Art and Science, Sinop, Turkey
ymdemirci@sinop.edu.tr