عنوان مقاله:
A GRAPH ASSOCIATED TO ESPECIAL ESSENTIALITY OF SUBMODULES

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خلاصه مقاله:
Let R be an associative ring with identity. In this paper weassociate to every R-module M a simple graph \Gamma_e(M), which we call it the essentiality graph of M. The vertices of \Gamma_e(M) are nonzero submodules of M and two distinctvertices K and L are considered to be adjacent if and onlyif K\cap L is an essential submodule of K+L.We investigate the relationship between some module theoreticproperties of M such as minimality and closedness ofsubmodules with some graph theoretic properties of\Gamma_e(M). In general, this graph is not connected. Westudy some special cases in which \Gamma_e(M) iscomplete or a union of complete connected components and give some examples illustrating each specific case.

کلمات کلیدی:
essential submodules, closed submodules, UC-module, Clique number, girth