Classifying Annihilator-Ideal Graphs for Finite Commutative Rings: Part Two.

The ideal annihilator graph $\Gamma(R)$ of a ring $R$, created by M. Behboodi and Z. Rakeei, is defined as follows: vertices are nonzero ideals with nonzero annihilators, and an edge exists between two vertices if the product of the corresponding ideals multiply to zero. We consider which types of graphs on 6 or fewer vertices can be realized as graphs of finite commutative rings, as well as questions relating $\Gamma(R)$ to $\Gamma_E(R)$ for finite rings. (Received September 22, 2011)