Some New classes of Super Edge-magic Graphs

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Abstract

A \((p,q)\)-graph \(G\) is edge-magic if there exists a bijection \(f: V(G) \cup E(G) \rightarrow \{1,2,...,p+q\}\) such that \(f(u)+f(uw)+f(v) = C_f\) is a constant for any edge \(uv\) of \(G\). If, in addition, \(f(V(G)) = \{1,2,...,p\}\), then \(G\) is super edge-magic. In this paper, some necessary conditions for an \(r\)-regular graph to be super-edge magic, have been obtained. Moreover, we introduce some new classes of graphs and prove that they are super edge-magic.