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## ON INTEGER ADDITIVE SET-INDEXERS OF GRAPHS

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## Abstract

A set-indexer of a graph G is an injective set-valued function  $f: V(G) \to 2^X$  such that the function  $f^{\oplus}: E(G) \to 2^X - \{\emptyset\}$  defined by  $f^{\oplus}(uv) = f(u) \oplus f(v)$  for every  $uv \in E(G)$  is also injective, where  $2^X$  is the set of all subsets of X and  $\oplus$  is the symmetric difference of sets. An integer additive set-indexer is defined as an injective function  $f: V(G) \to 2^{\mathbb{N}_0}$  such that the induced function  $g_f: E(G) \to 2^{\mathbb{N}_0}$  defined by  $g_f(uv) = f(u) + f(v)$  is also injective. A graph G which admits an IASI is called an IASI graph. An IASI f is said to be a weak IASI if  $|g_f(uv)| = max(|f(u)|, |f(v)|)$  and an IASI f is said to be a strong IASI if  $|g_f(uv)| = |f(u)||f(v)|$  for all  $u, v \in V(G)$ . In this paper, we study about certain characteristics of inter additive set-indexers.

Key Words : Set-indexers, Integer additive set-indexers, Uniform integer additive set-indexers, Compatible classes, Compatible index.

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