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ON THE PALETTE INDEX OF COMPLETE BIPARTITE GRAPHS [1]

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Abstract

The palette of a vertex x of a graph G determined by a proper edge colouring φ of G is the set $\{\varphi(xy) : xy \in E(G)\}$ and the diversity of φ is the number of different palettes determined by φ. The palette index of G is the minimum of diversities of φ taken over all proper edge colourings φ of G. In the article we determine the palette index of $K_{m,n}$ for $m \leq 5$ and pose two conjectures concerning the palette index of complete bipartite graphs.

Keywords: edge colouring, palette index, bipartite graph.

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