

ON THE PALETTE INDEX OF COMPLETE BIPARTITE GRAPHS¹

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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.

2010 Mathematics Subject Classification: 05C15.

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¹The research of the first author was supported by the Slovak grant VEGA 1/0368/16, by the grant APVV-15-0116 and by the Agency of the Ministry of Education, Science, Research and Sport of the Slovak Republic for the Structural Funds of EU under the project ITMS 26220120007.

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Received 22 March 2016

Revised 20 October 2016

Accepted 15 December 2016