



MANDATORY DECOMPOSITION OF COMPLETE
GRAPHS INTO $\{C_4, S_5\}$

Cheng-Yang Gu

Received May 27, 2022

Abstract

In this paper, C_4 and S_5 are used to represent star and cycle graphs with four edges respectively. We show that a necessary and sufficient condition for the existence of Mandatory decomposition of complete graphs K_n into $\{C_4, S_5\}$ and a necessary and sufficient condition for the existence of decomposition of complete graphs K_n into $\{C_4, S_5\}$.

Keywords and phrases: complete graphs K_n , complete bipartite graphs $K_{m,n}$, star S_k , cycle C_k .

