

Abstract

In this talk, the existence of perfect splitter sets in finite cyclic groups is studied, motivated by their applications in coding theory for flash memory storage. By using cyclotomic polynomials we derive a general condition for the existence of such splittings under certain circumstances. We further establish a relation between $B[-k,k](q)$ and $B[-k+1,k+1](q)$ splitter sets, and give a necessary and sufficient condition for the existence of perfect $B[-1,5](q)$ splitter sets.