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ON SOME SIGNED GRAPHS OF FINITE GROUPS

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Abstract: In this paper, we define two signed graphs namely, the order prime signed graph $OPS(\Gamma)$ and the general order prime signed graph $GOPS(\Gamma)$ of a given finite group Γ of order n. We discuss some properties of these two signed graphs.

Keywords and Phrases: Graph, group, order prime graph, general order prime graph, signed graph, order prime signed graph, general order prime signed graph.

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1. Introduction

For standard terminology and notion in group theory and graph theory, we refer the reader to the text-books of Herstein [3] and Harary [1] respectively. The non-standard will be given in this paper as and when required.

Throughout this paper, Γ denotes a finite group and the group of residue classes modulo n is denoted by $\mathbb{Z}_n$. The order of an element a in a group Γ is denoted by $o(a)$ and order of Γ is denoted by $o(\Gamma)$. The greatest common divisor (gcd) of two numbers x and y is denoted by (x, y).