M. M. Jaradat* (mmjst4@qu.edu.qa), Department of Mathematics, Statistics and Phy, Qatar University, Doha, 2713, Qatar, and M S Bataineh and T. Vetrik. The Ramsey numbers for theta graphs versus the wheel of order 5 .
The study of exact values and bounds on the Ramsey numbers of graphs forms an important family of problems in the extremal graph theory. For a set of graphs $S$ and a graph $F$, the Ramsey number $R(S, F)$ is the smallest positive integer $r$ such that for every graph $G$ on $r$ vertices, $G$ contains a graph in $S$ as a subgraph or the complement of $G$ contains $F$ as a subgraph. Ramsey numbers of various graphs including theta graphs and wheels have been extensively studied. We extend known results in the area by presenting exact values of the Ramsey numbers $R\left(\theta_{n}, W_{5}\right)$ for $n \geq 5$, where $\theta_{n}$ is the set of theta graphs of order $n$ and $W_{5}$ is the wheel graph of order 5. (Received August 31, 2018)

