UNIVERSITI TEKNOLOGI MARA

TECHNICAL REPORT

ON STRENGTH OF TWO FAMILIES OF CYCLE-RELATED GRAPHS

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IN THE NAME OF ALLAH, THE MOST GRACIOUS, THE MOST MERCIFUL

We are grateful to Allah S.W.T for giving us the strength to complete this project successfully.

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ABSTRACT

The new concept of graph labeling known as the strength of the graph has been proved but only to cycle graph and some trees graphs. This left us curious about the strength of other various families of cycle-related graphs. In particular, two of such families of graphs are the generalized theta graphs $\theta(a,b,c)$ and the one-point union of two cycles $U(C_a,C_b)$. Our research objectives are to determine the strength of the generalized theta graphs and to find the strength of the one-point union of two cycles. We are using GLS method that involved a sufficient condition to guarantee $str(G) = p + \delta(G)$ of order p with minimum degree of $\delta(G)$ Consequently, we obtained two families of cycle-related graphs G with $str(G) = p + \delta(G)$.

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