Susil Kumar Jena* (susil_kumar@yahoo.co.uk), Susil Kumar Jena, Professor, Dept. of Electronics \& Telecom Engineering, KIIT University, Bhubaneswar, Orissa, 751024, India. Method of Infinite Ascend applied on $A_{4}+n B 4=C 2$.
The Method of Infinite Ascend is a powerful technique which will regenerate infinite number of solutions for some diophantine equations. In this paper, the author would like to show that for any integral value of $n$, if the diophantine equation $\mathrm{A} 4+\mathrm{nB} 4=\mathrm{C} 2$ has a solution in positive integers, then by the help of a regenerative technique we can always find infinite number of solutions for this equation. This fundamental technique will prove very useful in the analysis and development of new results basing on such similar diophantine problems. In this paper, the author would illuminate this idea through various results with examples. (Received February 27, 2007)

