STRONG CONVERGENCE THEOREMS FOR GENERALIZED NON-EXPANSIVE MAPPINGS IN ABBAS AND NAZIR ITERATVE PROCESS

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Abstract: We analyze the Abbas and Nazir iteration and discuss its convergence properties to the fixed point of generalized non-expansive mappings. We prove that Abbas and Nazir iterative scheme converges for such mappings under suitable conditions. Furthermore, we illustrate with a numerical to support of our analytical proof.

Keywords and Phrases: Abbas and Nazir iterative process, generalized non-expansive mappings, uniformly convex, fixed point.

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1. Introduction

The single and multi step iterative schemes are applied in several fields of Engineering and Applied mathematics for computing the solutions of constrained minimization problems and feasibility solutions. Abbas and Nazir scheme is one of the