

A sufficient condition that guarantees a demiclosedness property for multi-valued nonexpansive mappings in a real Banach space is introduced. It is also proved that under this condition, the Mann sequence converges weakly to a fixed point of a multi-valued nonexpansive and quasi-nonexpansive mappings in a Hilbert space without the condition that the fixed point set of T is strict.

The results obtained give a partial answer to the open problem of removing the condition that the fixed point set of T is strict. Thus, the results extend, complement and improve the results on multi-valued and single-valued nonexpansive mappings in the contemporary literature.