ABSTRACT

The research reported in this thesis deals with the problem of controllability of neutral integrodifferential systems in Banach spaces. Several sufficient conditions are established for the controllability of such systems. The controllability of neutral integrodifferential systems with time varying delay systems is discussed. Further we investigate the boundary controllability of neutral integrodifferential systems. The results are obtained by using the analytic semigroup theory and the fixed point theorems due to Nussbaum, Sadovskii and Schaefer. All the results generalize the previous results of several researchers. Examples are provided to illustrate the theory.