Zeinab Bandpey* (zeinab.bandpey@morgan.edu), 1700 East Cold Spring Lane, Baltimore, MD 21251, and Bhamini P. Nayar (bhamini.nayar@morgan.edu), 1700 East Cold Spring Lane, Baltimore, MD 21251. A Study of Generalized Continuous Functions.

In the paper, Weak Continuity Forms, Graph Conditions and Applications, the concept of \( u \)-continuous functions are introduced and presented several applications of such functions. In the present study, by generalizing the concept of \( u \)-continuity using the notion of an \( \alpha \)-set, introduced by O. Njastad, three classes of functions are introduced and studied. The concepts introduced here are strongly \( u \)-continuous functions, \( \alpha u \)-continuous functions and semi-\( \alpha u \)-continuous functions.

A function \( g : X \to Y \) is \( \alpha u \)-continuous (strongly \( u \)-continuous, semi-\( \alpha u \)-continuous) at \( x \in X \), if for each \( \alpha \)-set (\( \alpha \)-set, open set) \( W \) which contains a closed neighborhood of \( g(x) \), there exists an \( \alpha \)-set (open set, \( \alpha \)-set ) \( V \) which contains a closed neighborhood of \( x \) and satisfies condition \( g(clV) \subseteq clW \). If \( g \) is \( \alpha u \)-continuous (strongly \( u \)-continuous, semi-\( \alpha u \)-continuous) at each \( x \in X \), we say \( g : X \to Y \) is \( \alpha u \)-continuous (strongly \( u \)-continuous, semi-\( \alpha u \)-continuous) on \( X \). (Received September 24, 2018)