

1145-VU-2077      **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  $g : X \rightarrow Y$  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  $g : X \rightarrow Y$  is  $\alpha u$ -continuous (strongly  $u$ -continuous, semi- $\alpha u$ -continuous) on  $X$ . (Received September 24, 2018)