**ABSTRACT**

In this paper a new class of open sets in a topological space called η-open sets is defined and the inclusive relationship of this set with the other existing sets like semi open, pre-open, α-open, r-open sets are discussed. In addition to this the concept of η-interior, η-closure, η-boundary, η-exterior, η-derived, η-border, η-neighbourhood, η-dense, η-residual are also introduced.