

# Optimal Maintenance for A System Under Fuzzy Environment

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## ABSTRACT

In this study, an attempt has been made to formulate a selective maintenance model under fuzzy environment. Since in real world, decision makers do not know the precise value of parameters, therefore, to deal with these uncertainties we assume these parameters as fuzzy numbers where the reliability of the component, number of failed component, cost of repairing a component, time required to repair the component, the total cost and time required for the whole system are considered to be fuzzy numbers. The main objective of this study is to work out the allocation of repairable components for a given system to maximize the system reliability within the imprecise repairable time and cost. A numerical problem is also discussed for illustrating the technique.

**Keywords:** Selective maintenance; Triangular Fuzzy Number; Fuzzy Set Theory.