

Strategies of Replacement Under Markov Renewal Process

Y. P. Gupta

National Institute of Health

and Family Welfare

India.

Shubhag Chand

National Institute of Public

Cooperation and Child Development

India.

Abstract

This paper presents an application of Markov Renewal Process for the study of different replacements policies which could be followed for providing replacement in a system passing through m states. The replacement policies involving idle time, replacement to extend system life and preventive maintenance replacement policy with minimal repair cost. The mean cost per unit for each policy has been worked out and in the case of policy involving idle time, the optimum value of the idle time, has also been obtained.

Keywords: Markov Renewal Process, Replacement Policy.