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Cairo, Egypt. *Numerical Solutions for a Maintenance and Replacement Model.*

In this paper we consider a model in which a system is maintained by replacing failed parts by spares and by repairing failed parts so that they may enter the pool of spares. We develop an algorithm to compute the limiting availabilities of a k-out-of-m system of independent components each having mean life  $t$  and mean repair period  $T$  for different values of  $k$ ,  $m$ ,  $t$ , and  $T$ . (Received August 31, 2000)