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RELIABILITY EVALUATION OF TWO STANDBY SYSTEMS BASED ON DIFFERENT REPAIR POLICIES

Upasana Sharma

Associate Professor, Department of Statistics, Punjabi University, Patiala

ABSTRACT

In the present paper two standby systems has been studied having two compressor units and one generator. In both models, initially one compressor unit is in operating state while other is in standby state. To keep system in functioning state at least one unit out of two units must be in working state. Here generator is considered as side by necessary standby unit which will be in operation when there is no electricity supply. When operative unit fails it is repaired and after repair it will work as good as new. In model I the priority of repair is given to recent failure where as in model II the priority is given to previously failed unit. Various measures of reliability such as MTSF, Availability and Profit Analysis has been calculated by using semi- Markov process and regenerative point techniques. For practical utility of our proposed model previous data of from Verka milk plant has been gathered and is used for graphical analysis.

Key Words: Standby System, Semi- Markov Process and Regenerative Point Techniques