Abstract

Queue is a very volatile situation which always cause unnecessary delay and reduce the service effectiveness of establishments or service industries. Long queues may create negative effects like wasting of man power, unnecessary congestion which leads to suffocation; even develop complications to customers and also to the establishments. This necessitates the study of waiting time of the customers and the facility. Control chart technique may be applied to analyze the waiting time of the customers in the system to improve the services and the effective performance of concerns. Control chart constructed for random variable $W$, the time spent in the system, provides the control limits for $W$. The prior idea about the expected waiting time, maximum waiting time and minimum waiting time from the parameters of the constructed chart makes effective use of time and guarantees customer’s satisfaction. Keeping this in view, the construction of control charts for waiting time is proposed for $M/M/1$ queueing model.

References

and sons, New Delhi.

**Index Terms**

Computer Science

Applied Sciences

**Keywords**

Waiting time  Control limits  Poisson arrival and Exponential service