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STUDY OF QUEUES AND CHARACTERISTICS OF WAITING TIME DISTRIBUTION IN POISSON QUEUE

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Abstract

The purpose of this paper is to review the literature on queuing and to obtain steady state solution for M/M/S system when balking and reneging behaviour of customers for limited space is taken into consideration. The characteristics of waiting time have been calculated and the result of single server case has also been calculated as a particular case which tallies with the previous result. Babu Raj and Manoharan (1998) considered a single and batch service with control limit policy c and obtained steady state probabilities where the server serves a single customer if the queue length is less than or equal to c and serves all the units together in a batch if the system size is greater than c. The present work is the first attempt on the steady state solution for M/M/S system when balking as well as reneging behavior has been taken into consideration. The paper focuses on probability of service under steady state conditions.

Key Words : *Waiting time, Poisson Queue, Balking, Reneging.*

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