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SERVICE SURRENDER QUEUES WITH TRUNCATION OF PROBABILITY

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Abstract

The present literature on queueing theory focuses on the one and only one queue,which is formed in front of a server and does not focus on the queues formed when the server has no service to offer to the customers after some time. Moreover the services are such that they can be surrendered to the server by the customers after using it for some finite period of time. Here queueing systems have two different queues namely a 'primary queue' and a 'secondary queue'. The existence of secondary queue is possible only when server has limited service and the system has a characteristic of 'Service surrender facility'. This paper contains analysis of secondary queues where a model with infinite range of service holding time and truncation of probability of service surrender to the right is considered. The expected waiting time of a customer in the entire queueing system and the rate of service wastage are obtained.

Key Words : *Secondary queues, Service surrender, Service wastage, Service holding time.*