STUDY OF THE SYSTEM OF TWO QUENES
IN SERIES WITH BLOCKING IN THE
FIRST STAGE

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ABSTRACT

This paper considers a queueing system which was met while studying, the congestion phenomena in Egyptian ports. The system can also be met in many other applications. The considered queueing system is a system with two service stages in series, with infinite quene capacity in the first stage (where one service station only is present) and a finite quene capacity in the second stage (where many service stations may be present). The distribution of arrival to the first stage is assumed to the poisson, and the disttibution of service time for a customer at each stage is

assumed to be negative exponential.

In the steady - state case, and through analytical investigation, the state probabilities of the system together with the state probabilities at each stage, and some indicators that may be useful in the study of the efficiency of the system are obtained.