## ON A GENERALIZED Mx/E(a,b) k /1/1 QUEUEING MODEL WITH BULK ARRIVALS AND BATCH SERVICES OF ACCESSIBLE SIZE

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## Abstract

Queueing models have a great role in analyzing the real life problems arising at places like computer communications systems, data voice transmission road traffic congestion, defense operations and other emerging areas of management, science and technologies. Among various queueing models, queue with bulk arrival and phase services of accessible size have gained wide applications in many fields of modern telecommunication systems, aviation traffic control, data communication networks and neuro-physiological problems etc. Keeping in view the practical aspect of bulk arrivals queueing models several noteworthy researchers [1, 3, 4, 5,...,12, 13 & 15] have devoted their immense contributions. Among them Hawkes [4] confined his attention to analyze the bulk arrival queue with priority queue discipline and he investigated successfully the time dependent solution. Thereafter, Neuts [14] focused his attention to analyze a general class of bulk queues with Poisson input. Later Ghosal et al [3] succeeded to present important and useful characteristics of the system size distribution for some bulk arrival queueing systems. Recently Maurya [11] has discussed the non-homogeneous bulk arrival Mx(t)/G(t)/1 queueing model with general service time distribution and he obtained successfully the co-variance structure of the model that the number of present customers in the system

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