An Introduction Queveing Theory by B. R. K. Kashyap and M. L. Chaudhury (1988) Arkay Publications : Calcutta.

The book under review has five chapters followed by various appendices. The first two chapters are on Poisson Queues. A precise description of the Queueing System and the associated problems are followed by the steady state anaiysis of M/M/1 Queue. The second chapter derives the exact distributions of Queue length and busy period for the M/M/1 and M/M/∞ Queues, using Laplace transforms. The third chapter discusses the M/G/1 and G/M/1 Queues first using the embedded Markov chain and then by the supplementary variable technique (one considers the number in the system and the time of last departure jointly). The chapter concludes with a brief introduction to the Matrix-geometric method of Neuts. Chapter 4 deals with the steady state analysis of buik (random) arrivals system as well as bulk (deterministic) service systems. The chapter concludes with Queues in series also known as Tandem Queues. Chapter 5 discusses applications to inventories, scheduling and transportation. Each chapter has a small problem set—both theoretical as well as applied.

The book is mainly addressed to applied students and the style is mostly informal. The mathematically oriented students may find the discussion puzzling at a few places. For instance, is the Dirac function δ (u—a) the density of point mass at a (p. 6) ; is the mean number of customers in the queue equal to the mean number of arrivals during a mean waiting time (p. 11) ; again on pase 56, does $P_n(x, t)$ have a limit as $t \rightarrow \infty$ and even if it has can one use arguments of § 1.5 —even informally—to arrive at equation (6) ?

While commenting on the Markovian nature of the exponential distribution (p. 4) the authors should have remarked that this is the only such distribution. The second property of the exponential distribution (p. 5) is messed up with interarrivals etc. Those statements should have been preceded by a clear statement of the second property. What the authors have in mind is that if $T \sim Exp(\lambda)$ then $(P\ (T \epsilon\ (t, t+\Delta t)/T>t) = \lambda\ \Delta t + 0(\Delta t)$. It may not be a bad idea to sraw the attention of the reader to the fact that N(t) is a simple jump process and $N(t_n+0)$ (p. 42) and $N(t_n-0)$ (p. 50) are the right and left limits respectively. Considering the discussion in § 3.3 and § 3.4 one feels that a small section on discrete time queueing models and relation with branching process would have been illuminating.

Inspite of the comments made above, the reviewer feels that this is a well written book and every student of Queueing Theory should read at least once.

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