International J. of Math. Sci. & Engg. Appls. (IJMSEA) ISSN 0973-9424, Vol. 8 No. I (January, 2014), pp. 337-347

## STOCHASTIC ANALYSIS OF A QUEUE NETWORK WITH IMPATIENT CUSTOMERS

ARTI TYAGI<sup>1</sup>, T. P. SINGH<sup>2</sup> AND M. S. SAROA<sup>3</sup>

 Research scholar, M. M. University Mullana, Ambala, India
Professor (Mathematics & O.R.)
Yamuna Instt. of Engg. & Tech., Gadholi- Yamuna Nagar, India
Professor, Department of Mathematics, M. M University Mullana., Ambala, India

## Abstract

This paper considers the transient as well as steady state behavior of a serial queue system with impatient customers. The system consists of two queues in series in which arrivals follow Poisson distribution and the service rate as well as reneging rate depends upon their respective queue numbers. The expression for the system characteristics have been derived and the effect of customers impatience on the development of waiting lines has been analyzed for the model behavior whenever, queue discipline is first come first out. Numerical example is given for better understanding.

© http://www.ascent-journals.com