In this paper, single server queue with poisson arrivals, triple stages of service with service interruption & compulsory server vacation is considered. After the completion of first stage and second stage of service, the server must provide the third-stage of service. After the completion of each third stage of service, the server will take compulsory vacation. The vacation time is, exponentially distributed. The time dependent probability generating functions have been obtained in terms of Laplace transforms.

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**Index Terms**

Computer Science

- Applied Mathematics

**Keywords**

- Poisson Arrival
- Probability Generating Functions
- Time Dependent Solution
- Service Interruption
- Server Vacation
Time dependent solution of a Non-Markovian Queue with Triple stages of service having Compulsory vacation