

Ques. 2 What do you mean by arrival rate and services rate in queuing theory. What is the importance of replacement.

Ans
 λ : the arrival rate (the expected time between each customer arriving, e.g. 30 seconds); μ : the reciprocal of the mean service time (the expected no. of consecutive service completions per the same unit time, e.g. per 30 seconds).

Queueing notation and a simple example. λ to be the mean (or average) no. of arrivals per time period, i.e. the mean arrival rate. μ to be the mean (or average) number of customers served per time period, i.e. the mean service rate.

5 most important reasons of replacement are:-

a) Obsolescence -

It may be due to lessening in the demand for the services rendered by the equipment or by the availability of more efficient equipment.

b) Deterioration -

It is the decline in performance of equipment due to wear and tear, misalignment etc.

c) Working conditions -

It may be thought of replacing old equipments and machinery which create unpleasant i.e. smoky, noisy, etc.

d) Inadequacy -

When the equipment does not have sufficient capacity to meet the present demand and is inadequate to meet the challenges of making new products or existing product in large quantities.

e) Rapid technological changes -

Technology is progressively rapidly. Newer and better equipments are being developed and turned out every year.