

Q.2 → What do you mean by arrival rate and service rate in queuing theory? What is the importance of replacement.

Arrival Rate, and Service Rate-

In queuing system, it is supposed that the customers arrive in this system basically and follows a poisson distribution or equivalently the inter-arrival times follow exponential distribution.

There are two queuing situations:-

- ① Pure Birth model
- ② Pure Death model

Replacement :- The replacement theory of operation research is basically meant for decision-making process for replacing old equipment with a new one, generally for better usage.

[Replacement Problem]

Replacement of assets
that deteriorates
with time

Replacement of assets
which fail suddenly