

→ Exponential phase of growth is a Δ pattern of balance to growth

→ All the cells are dividing regularly by binary fission and by geometric progression
1, 2, 4, 8, etc or $2^0, 2^1, 2^2, \dots, 2^n$
where n = number of generation

→ The cells divide at a constant rate depending upon the composition of the growth medium and the condition of incubation.

The rate of exponential growth of a bacterial culture is expressed as generation time also called doubling time of the bacterial population.

The generation time is the time interval required for the cells (or population) to divide.

iii) Stationary Phase →

→ Exponential growth can't be continued forever in a batch culture (eg. a closed system)

→ In this phase the cell growth has leveled off and become constant.