

Classification of Vibrations

Forced vibration : If the disturbing force do not act during the period of vibration, it is called

Free vibration : If the disturbing force acts at periodical interval during the vibration of the elastic body, it is called forced vibration.

Free vibrations are again classified into 2 types. Longitudinal, Transverse and Torsional vibrations.

If the vibration takes place along the axis of the vibrating body, then the vibration is known as longitudinal vibration eg: vibration of a spring mass system.

If the vibration takes place perpendicular to the axis of the body, then it is known as transverse vibration. eg: vibration of a simple pendulum.

Torsional vibration refers to the motion of a shaft in which the shaft is twisted about its axis first in one direction and then released.

