

Paper –Principles and Practice of Management

Dr. James Hussain

Paper Code-MB-101,

Assistant Professor (Guest Faculty)

MBA, Sem-I

[Email.-mbajames123@gmail.com](mailto:mbajames123@gmail.com)

## **Topic- Difference between Open System & Closed System**

The boundary of a system classifies it into two parts: closed system and open system. All living organisms are open system while all non-living systems are closed system. The major differences between the two are as follows:

1. Closed systems are those that have no interaction with environment, that is, no outside system impinges on them or for which no outside systems are to be considered. Open systems are those that interact with their environment, that is, they have systems with which they relate, exchange, and communicate
2. Closed systems are self-contained and self-maintaining as they do not interact with the environment. Open systems interact with their environment and in this interaction, they import energy and export output. Because of this interaction, closed systems are rigid and static but open systems are dynamic and flexible as they are subject to change by environmental forces.
3. Closed systems are generally mechanical, for example, an automatic watch. Therefore, once they are set, they work. However, open systems are affected by environmental factors and they have to be adjusted according to environment. Thus, they require restructuring because of change in environment.
4. Closed systems are like close loop while open systems are characterised by negative entropy. They import more energy than is expanded or consumed. Thus, they can grow over the period of time. When this relationship is reversed, the open systems decline.

5. Open systems have feedback mechanism that helps them to maintain homoeostatic a kind of equilibrium. Homoeostatic is a process through which a system regulates: itself around a stable state. For example, human body works on the principle of homoeostatic. It maintains its temperature relatively at a constant level despite variations in the environmental temperature. Similarly, thermostat maintains this equilibrium. However, organisational equilibrium is not static. It, beings a dynamic system, gets feedback to maintain dynamic equilibrium. In closed systems, there is no such feedback mechanism.

The distinction between closed and open systems is there but really no system is a closed one but has some properties of open systems. The classification of various systema into closed and open is not very proper. Therefore, it is more appropriate to think system in terms of the degree to which they are open or closed rather than using a dichotomy a open-close.