1. What is meant by heat reservoir?
   A heat reservoir is a body of uniform temperature throughout, the mass of which is sufficiently large that its temperature is unchanged by the absorption or ejection of heat.
2. What is a source and sink in thermodynamics?
   There are two types of thermal energy reservoirs, a thermal energy source and a thermal energy sink. A thermal energy source supplies heat to a system, whereas a thermal energy sink absorbs heat from a system.
3. What is the relationship between heat pump and refrigerator?
   Coefficient of Performance (COP): Similar to a refrigerator, the COP of a heat pump is a measure of its efficiency. It represents the ratio of the heat transferred to the desired space to the work input required to achieve that transfer.
4. Refrigerators work on the second law of thermodynamics. In the process of refrigeration, unwanted heat is taken from one place and discharged into another. The common refrigerator which we have in our homes, works on the principle of evaporation
5. What is the theory of the Carnot cycle?
   A Carnot cycle is defined as an ideal reversible closed thermodynamic cycle. Four successive operations are involved: isothermal expansion, adiabatic expansion, isothermal compression, and adiabatic compression.
6. What are the 4 steps of the Carnot cycle?
   The four stages in the Carnot cycle. (A) Stage 1: Isothermal expansion under heat input Q1, (B) Stage 2: Adiabatic expansion accompanied by a fall in temperature T1 to T2, (C) Stage 3: Isothermal compression, Q2 exhausted, (D) Stage 4: Adiabatic compression accompanied by an increase in temperature T2 to T1.
7. What is the working principle of Carnot engine?
   Carnot Engine - Working and Efficiency. Carnot engine is a theoretical thermodynamic cycle proposed by Nicolas Léonard Sadi Carnot in 1824. Carnot states that a hot body is required that generates heat and a cold body to which the caloric is conveyed, which produces mechanical work in the process.