

CHAPTER-2 Refrigeration & Air-Conditioning-RAC

1. Refrigerator and heat pump

- 1 ton of refrigeration is equivalent to
 - 1 kW
 - 2.5 kW
 - 3.5 kW
 - 5 kW
 [SSC-JE: 2013]
- The food compartment of a refrigerator is maintained at 4°C by removing heat from it at a rate of 360 kJ/min. if the required power input the refrigerator is 2 kW, the COP if the refrigerator is
 - 2.0
 - 1/3
 - 0.5
 - 3.0
 [SSC-JE: 2014 E]
- A refrigeration cycle operates between condenser temperature of $+27^{\circ}\text{C}$ and evaporator temperature of -23°C . the Carnot coefficient of performance of cycle will be
 - 0.2
 - 1.2
 - 5
 - 6
 [SSC-JE: (Forenoon) 3.3.2017]

2. Refrigeration cycles

- A bell Coleman cycle is
 - Reversed stirling cycle
 - Reversed Carnot cycle
 - Reversed joule cycles
 - Atkinson cycle
 [SSC-JE: 2014 M]
- The expansion process in the throttling device of a vapour compression cycle is
 - Isothermal process
 - Adiabatic process
 - Isenthalpic process
 - Isentropic process
 [SSC-JE: 2015]

- Air refrigerator is preferably used in aircrafts because :
 - Is used air which is available in plenty in the atmosphere
 - It has high COP
 - Its weight per top the refrigerator is low
 - It is cheaper
 [SSC-JE: 2015]
- Sub – cooling in a vapour compression cycles
 - Does not affect the required work and increases the refrigerator effect
 - Increases the required work and decreases the refrigerator effect
 - Increase the required work and refrigerator effect
 - Decreases the required work and refrigerator effect
 [SSC-JE: 2015]
- Lowering the evaporator pressure in a vapour compression cycle
 - Increases the required work and decreases the COP
 - Decreases the required work and COP
 - Decreases the required work and increases the COP
 - Increases the required work and increase the COP
 [SSC-JE: 2015]
- In ammonia – water vapour absorption refrigerator system
 - Ammonia is the absorption and water is refrigerant
 - Ammonia is the refrigerant and water is absorption
 - Both ammonia and water are absorption
 - Bothe ammonia and water are refrigerant
 [SSC-JE: 2015]
- The refrigeration plants are charged by refrigerants from the cylinder at the
 - Suction of compressor
 - Crank case of compressor
 - Evaporator
 - Receiver
 [SSC-JE: (afternoon)1.3. 2017]