1)The process of reducing and maintaining the temperature of a space or material, below the temperature of the surrounding is called as.

1. Vaporization
2. **Refrigeration**
3. Evaporation
4. Absorption

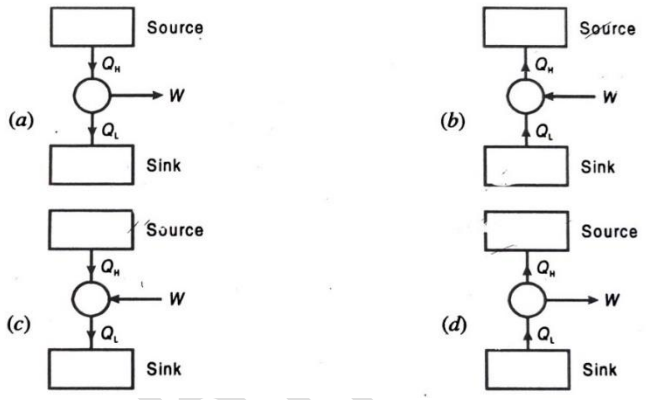
2)State the Law related to the Refrigeration.

1. Zeroth law of thermodynamics
2. Kelvin Plank Statement
3. **Clausius statement of second law**
4. First law of thermodynamics

3)A refrigeration system

1. **removes heat from a low temperature body and delivers it to a high temperature body**
2. removes heat from a high temperature body and delivers it to a low temperature body
3. rejects energy to a low temperature body
4. produces work

4)Which of the following represent heat pump?



5)The ratio of heat extracted in the refrigerator to the work done on the refrigerant is called as.

1. **coefficient of performance of refrigeration**
2. coefficient of performance of heat pump
3. relative coefficient of performance
4. refrigerating efficiency

6)The coefficient of performance (COP) is the reciprocal of the efficiency of a heat engine

1. **True**
2. False

7)The coefficient of performance is always ------- one

1. equal to
2. less then
3. **greater than**

8)The coefficient of performance (C.O.P) of a refrigerator working as a heat pump is given by

1. $(COP)_P=(COP)_R+2$
2. **$(COP)_P=(COP)_R+1$**
3. $(COP)_P=(COP)_R-1$
4. $(COP)_P=(COP)_R$

9)COP of Refrigerator is

1. Q_2/Q_2-Q_1
2. **Q_1/Q_2-Q_1**
3. Q_2-Q_1/Q_1
4. Q_2-Q_1/Q_2

10)Actual COP is always less than theoretical COP

1. **True**
2. False

11) For practical purpose the value of 1 TOR is equal to

1. 260 kJ/min
2. 270 kJ/min
3. **210 kJ/min**
4. 310 kJ/min

12)A condenser of refrigeration system rejects heat at the rate of 120 kW while its compressor consumes a power of 30 kW. The coefficient of performance of the system will be

1. 1/4
2. 1/3
3. **4**
4. 3

13)Process not involved in Reversed Carnot cycle

1. Isentropic Compression
2. Isothermal Compression
3. Isentropic Expansion
4. **Isobaric Expansion**

14)Bell Coleman cycle is also called as

1. Brayton cycle
2. Reversed Carnot cycle
3. Otto cycle
4. **Reversed Brayton cycle**

15)A heat pump working on a reversed Carnot cycle has a COP of 6. It works as a refrigerator taking 1kW of work input. The refrigerating effect will be

1. 1kW
2. 3kW
3. **5kW**
4. 6kW

16)A reversible engine has ideal thermal efficiency of 30%. When it is used as a refrigerating machine with all other conditions unchanged, the COP will be

1. **3.33**
2. 2.33
3. 1.33
4. 4.33

17)Air Refrigerator works on Bell Coleman cycle

1. **True**
2. False

18)Air Refrigeration cycle is used in

1. Domestic Refrigerators
2. Commercial Refrigerators
3. Air conditioning
4. **Gas Liquefication**

19)COP of Heat pump working on a reversed Carnot cycle is

1. T_1/T_2-T_1
2. T_2-T_1/T_1
3. T_1-T_2/T_1
4. **T_2/T_2-T_1**

20)In air-conditioning of aeroplane, using air as a refrigerant, the cycle used is

1. Reversed Carnot cycle
2. **Reversed Brayton cycle**
3. Reversed Joule cycle
4. Reversed Otto cycle

21)In aircraft air refrigeration cycle is used because of

1. **low weight per tonne of refrigeration**
2. low temperature at high altitudes
3. high heat transfer rate
4. higher coefficient of performance

22)Air refrigeration is not used for ground installation

a) **True**
b) False

23)Which is not the major part of Bell Coleman air refrigeration cycle

1. Compressor
2. Heat Exchanger
3. Evaporator
4. **Economizer**

24)A refrigerator operates on the reversed Carnot cycle working between -12°C and 32°C. Determine its COP

1. 6.931
2. **5.931**
3. 4.931
4. 3.931

25)To maintain the temperature of -30°C Refrigeration cycle works on reversed Carnot cycle requires 2 kW per tonne of refrigeration. Determine temperature of atmosphere to which heat is rejected.

1. 333.312
2. **381.185**
3. 299.287
4. 412.532