

1- In condensers of vapor compression cycle , the refrigerant actually undergoes:

- a- Desuperheating b- Phase change c- Subcooling d- all a,b and c .

Answer: d

2- To balance the heat rejection in the condenser the following parameter must be controlled during the machine operation :

- a- The evaporating temperature b- The flow rate of the cooling media through the condenser  
c- the compressor power d- the type of the refrigerant

Answer: b

3- Based on the external fluid, condensers can be classified as follows :

- a- Air cooled condensers b- Water cooled condensers c- Evaporative condensers d- all a,b and c

Answer: d

4- \_\_\_\_\_ condensers, require a separate cooling tower.

- a- Air cooled b- evaporative c- water cooled d- All

Answer: c

5- \_\_\_\_\_ type evaporators are mainly used in domestic refrigerators and cold storages.

- a- Shel and tube b- natural convection c- shell and coil d- double pipe

Answer: b

6- The advantages of the natural convection evaporator coils are that the coil a- takes no floor space b- requires low maintenance cost c- have low cooling fan power d- both a and b

Answer : c

7- The typical heat rejection ratio of a condenser for evaporating temperature of 5°C and a condensing temperature of 43°C is :

- a- 2.07 b- 1.33 c- 1.243 d- 3

Answer : c

8- The value overall coefficient of heat transfer multiplied by the area of a condenser of 253 kW and logarithmic mean temperature difference of 7.69 °C is :

- a- 41 kW/°C b- 12 kW/°C c- 51 kW/°C d- 32.9 kW/°C

9- For Reynolds number of 14000 and Prandtl number of 9.6 , the Nusselt number for water flow inside a tube is equal to :

- a- 106.14 b- 117.89 c- 100 d- 133.23

Answer: b

10- The outer U value of an evaporator having thermal resistance of 0.013908 ( $m^2 \cdot ^\circ C / W$ ) and area ratio of 0.783 is equal to :

- a- 56.3 ( $W / m^2 \cdot ^\circ C$ ) b- 32.4 ( $W / m^2 \cdot ^\circ C$ ) c- 41.8 ( $W / m^2 \cdot ^\circ C$ ) d- non of the stated

Answer : a