AIR CONDITIONING AND REFRIGERATION

Test your knowledge on air conditioning and refrigeration through this quiz with ten multiple choice questions.

Name: ______________________________
Organization: ______________________________
Date: ______________________________

1. One ton of refrigeration (TR) is equal to

☐ a. 3023 kCal
☐ b. 3.52 kW
☐ c. 12000 BTU/hr
☐ d. All of the above

2. The driving force for refrigeration in vapour absorption refrigeration plants is

☐ a. Mechanical energy
☐ b. Thermal energy
☐ c. Electrical energy
☐ d. All of the above

3. The essential parameters to estimate cooling load from air side across an air handling unit (AHU) or a fan coil unit (FCU) are

☐ a. Flow rate
☐ b. Dry bulb temperature
☐ c. RH% or wet bulb temperature
☐ d. All of the above

4. Higher COP can be achieved with

☐ a. Lower evaporator temperature and higher condenser temperature
☐ b. Higher evaporator temperature and Lower condenser temperature
☐ c. Higher evaporator temperature and higher condenser temperature
☐ d. Lower evaporator temperature and Lower condenser temperature
5. The approximate percentage reduction in power consumption with 1 °C rise in evaporator temperature in refrigerating systems is

- a. 1%
- b. 2%
- c. 3%
- d. 4%

6. The percentage refrigeration compressor power reduction with 0.55 °C temperature reduction in water returning from cooling tower is

- a. 1%
- b. 2%
- c. 3%
- d. 4%

7. The device used to cool the refrigerant in a vapor absorption chiller is a

- a. Vacuum pump
- b. Condenser
- c. Vacuum condenser
- d. None of the above

8. The refrigerant temperature after the expansion device compared to after condenser in the vapor compression refrigeration cycle is

- a. Lower
- b. Higher
- c. Same
- d. None of the above

9. For a small office room with the size of 2 m X 2 m the tons of refrigeration required for comfort cooling is

- a. 1 TR
- b. 1.5 TR
- c. 0.75 TR
- d. 0.4 TR

10. One mm scaling build up in the condenser tube will lead to a percentage increase power consumption

- a. 50%
- b. 40%
- c. 10%
- d. 25%
Test your knowledge: Air Conditioning and Refrigeration

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