Reg. No. : | | | | | | | | | | |

Question Paper Code: 58764

B.E. / B.Tech.DEGREE EXAMINATION, NOV 2018

One credit course

Mechanical Engineering

15UME864-BASICS IN REFRIGERATION AND AIRCONDITIONING

(Regulation 2015)

Duration: One hour Maximum: 30 Marks

Answer ALL Questions

PART A - (10 x 1 = 10 Marks)

1. For air conditioning the operation theater in a hospital, the percentage of outside air in the air supplied is

   (a) 0 (b) 20 (c) 50 (d) 100

2. In a refrigeration system, the expansion device is connected between the

   (a) Compressor and condenser (b) Condenser and receiver

   (c) Receiver and evaporator (d) Evaporator and compressor

3. The fluids used in Electrolux refrigerator are

   (a) Water and hydrogen (b) Ammonia and hydrogen

   (c) Ammonia, water and hydrogen (d) None of these

4. One Ton refrigeration is equivalent to

   (a) 1 kW (b) 2.5 kW (c) 3.5 kW (d) 5 kW

5. During humidification process, dry bulb temperature

   (a) Remains constant (b) Increases (c) Decreases (d) None of these

6. During humidification process, _____ increases.

   (a) Wet bulb temperature (b) Relative humidity

   (c) Dry bulb temperature (d) Specific humidity

7. The wet bulb depression is zero when relative humidity is

   (a) Zero (b) 0.5 (c) 0.75 (d) 1.0

8. The power per tonne of refrigeration is

(a) 3.5/C.O.P (b) C.O.P/3.5 (c) 3.5 × C.O.P. (d) None of these

9. Presence of moisture in a refrigerant affects the working of

(a) Compressor (b) Condenser

(c) Evaporator (d) Expansion valve

10. In a refrigeration system, the expansion device is connected between the

(a) Compressor and condenser (b) Condenser and receiver

(c) Receiver and evaporator (d) Evaporator and compressor

PART – B (1 x 20= 20Marks)

21. (a) Explain in detail about Aqua-ammonia Absorption Refrigeration Systems with neat sketch. (20)

Or

(b) Explain in detail about Working principle of Automatic Expansion Valve with neat sketch. (20)