S.B. Roll No……

RAC EQUIPMENT

5th/RAC/5415/Nov'15

Duration: **3 hrs.** **M.Marks=75**

SECTION – A

Q1. Fill up the blanks: **1x15=15**

a) The compressor used in domestic refrigerator is _____sealed.((hermetic/semi-hermetic)
b) The centrifugal compressors are generally used for refrigerator which require large displacement and _____ condensing pressure.(low/high)
c) Evaporator is_____ transfer surface in which volatile liquid vapourises.(heat/mass)
d) Direct expansion evaporator is_____ type evaporator.(flooded/dry)
e) In a refrigeration system having water cooled condenser, In a hot humid day the head pressure will be _____.(higher/lower)
f) There are _____types of condensers.(three/two)
g) In _____ draft cooling tower,the fan is mounted near the exit.(Forced/induced)
h) _____is a pressure measuring device.(anemometer/manometer)
i) The instrument which measures humidity of air is known as_____.(pyrometer/hygromter)
j) In solar system,vapour_____ system is used.(absorption/compression)
k) The solar power refrigeration system has _____COP.(low/high)
l) The COP of vapour compression system is_____than vapour absorption system.(lesser/greater)
m) A_____expansion valve is preferred for the absorption system.(automatic/thermostatic)
n) A_____is a device which is used to measure air flow rate.(pitot tube/psycrometer)
o) _____is used in the high pressure side of refrigeration system.(Evaporator/Condenser)

SECTION – B

Q2. Do any SIX. **6x5=30**

a) Discuss the desirable properties of compressor lubricants.
b) Discuss the effect of fouling on condensers.
c) Define i)Tower approach ii)Tower range iii) Drift loss iv)Bleed off v)Make up water.
d) Explain low pressure cut switch.
e) Explain the working of hand pump.
f) Discuss the flooded type evaporator.
g) Explain the induced draft cooling tower.
h) Describe the inner view of dehydrator.
i) Write a short note on air cooling and air heating coils.

SECTION – C

Do any THREE. **10x3=30**

Q3. Describe the rotary compressors with neat diagrams.
Q4. Explain an evaporative condenser with help of diagram.
Q5. Discuss different types of fans in detail.
Q6. Explain the desirable properties of different types of insulating materials.
Q7. Explain the solar power refrigeration system. Write down the advantages and disadvantages over vapour compression system also.
Q8. Describe any two pressure measuring devices.