

RAC EQUIPMENT
5TH Exam/RAC/5415/May'17

Duration: 3 hrs.

M.Marks:75

SECTION – A

Q1. Fill up the blanks:

1.5x10=15

- a) The work requirement for a reciprocating compressor is minimum when the compression process is _____.(isothermal/isentropic)
- b) Most air cooled condensers are designed to operate with a temperature difference of _____.(22°C/14°C)
- c) The temperature of the boiling refrigerant in the evaporator must always be _____ than that of the surrounding medium.(higher/lower)
- d) The expansion devices used with flooded evaporators are called _____ valves.(float/expansion)
- e) The air at inlet of a fan is _____ atmospheric pressure.(above/below)
- f) The working of thermostatic expansion valve depends upon increase or decrease of _____ of the evaporator.(temperature/pressure)
- g) The bare tube evaporators are also known as _____ surface evaporators. (prime/extended)
- h) _____ is an air flow measuring device.(Pitot tube/Manometer)
- i) The instrument which measures humidity of air is known as _____.(anemometer/psychrometer)
- j) A low pressure and high pressure cut out switch controls low and high pressure _____.(alternately/simultaneously)

SECTION – B

Q2. Attempt any six Questions.

5x6=30

- a) Discuss the points to be considered while selecting a condenser for a refrigeration system.
- b) What factors affect the capacity of an evaporator?
- c) What are the advantages and applications of rotary compressor?
- d) Discuss the different types of humidifiers.
- e) What are the factors which affect thermal conductivity?
- f) Explain the working of overload protector with neat sketch.
- g) Discuss the basic characteristics of fans used in refrigeration system.
- h) What are absorbents? What are their uses?
- i) Describe natural draft cooling tower.

SECTION – C

Attempt any three Questions.

10x3=30

- Q3.** Define evaporator. What are its types? Explain flooded type of evaporator with the help of neat sketch.
- Q4.** Describe the hermetic, semi hermetic and open type compressor.
- Q5.** Explain the different types of pumps commonly used in refrigeration system.
- Q6.** Describe any two air flow measuring instruments.
- Q7.** Write down on following
 - i) Diaphragm Bourden tube
 - ii) condenser by pass.