

- Q.28 Explain the domestic Electrolux refrigeration system with neat sketch.
- Q.29 Write short note on reciprocating compressor.
- Q.30 Explain overload protector with the help of neat sketch.
- Q.31 Explain high pressure cut-out switches.
- Q.32 Explain humidification and dehumidification.
- Q.33 Explain the process of sensible cooling in psychrometry.
- Q.34 Write the advantages and disadvantages of split air conditioning.
- Q.35 Define Evaporator & name the various type of evaporators

SECTION-D

Note: Long answer type questions. Attempt any two questions out of three questions. (2x10=20)

- Q.36 Draw and explain actual vapour compression refrigeration cycle.
- Q.37 Explain the working of water Cooled Condenser with a neat sketch.
- Q.38 Explain window type air conditioning system with the help of neat sketch. Give its advantages.

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5th Sem / Mech. Engg.(MSIL) Subject:- Refrigeration and Air Conditioning

Time : 3Hrs.

M.M. : 100

SECTION-A

Note: Multiple Choice questions. All questions are compulsory. (10x1=10)

- Q.1 Which of the following refers to the term COP of refrigeration?
- Cooling for Performance
 - Coefficient of Performance
 - Capacity of Performance
 - Co-efficient of Plant
- Q.2 Which of the following is the common application of Air standard refrigeration system?
- Cold storage
 - Car air conditioning system
 - Domestic refrigerators
 - Aircraft air conditioning
- Q.3 How is the refrigerant used in the Air refrigeration cycle?
- In the compressor
 - In the condenser
 - Directly in contact
 - Not used at all
- Q.4 Which of the following process is used in summer air conditioning?
- Heating and Humidification
 - Cooling and Dehumidification
 - Humidification
 - Dehumidification

- Q.5 Which of the following is not the type of refrigerant?
- Organic refrigerants
 - Inorganic refrigerants
 - Azeotrope refrigerants.
 - Halo-helium refrigerants
- Q.6 An ideal vapour absorption refrigeration system may be regarded as a combination of _____.
- Carnot engine and Carnot pump
 - Carnot refrigerant and Carnot pump
 - Carnot engine and Carnot refrigerant
 - Carnot engine alone
- Q.7 What is the refrigerant number of water?
- R-717
 - R-744
 - R-118
 - R-100
- Q.8 What is the purpose of using a refrigerant compressor?
- Raise the temperature of refrigerant
 - Reduce the temperature of refrigerant
 - Reduce the pressure of refrigerant
 - Expand the refrigerant
- Q.9 Mixture of dry air and water vapor is _____.
- moist air
 - dry air
 - fresh air
 - saturated air
- Q.10 What is the mass of water vapor present in 1 kg of dry air called?
- Saturated air
 - Relative humidity
 - Degree of saturation
 - Specific Humidity

SECTION-B

Note: Objective type questions. All questions are compulsory.
(10x1=10)

- Q.11 Write the SI unit of refrigeration effect.
- Q.12 Define entropy.
- Q.13 Write the function of liquid line in simple vapour compression.
- Q.14 Give the name of a secondary refrigerant.
- Q.15 Write the principle of vapour absorption system.
- Q.16 Write the chemical name of R-134a.
- Q.17 Define evaporator.
- Q.18 Define dew point depression.
- Q.19 Give the acceptable range of humidity in air-conditioning.
- Q.20 Define Relative Humidity.

SECTION-C

Note: Short answer type questions. Attempt any twelve questions out of fifteen questions.
(12x5=60)

- Q.21 Explain dry ice refrigeration.
- Q.22 Explain reversed Carnot cycle refrigerator.
- Q.23 Write a short note on effect of sub cooling, super heating and mass flow rate in vapour compression refrigeration cycle.
- Q.24 Explain Psychrometry chart & show various processes on the chart.
- Q.25 Write the five properties of R-22.
- Q.26 How is a refrigerant selected? Explain.
- Q.27 Give five disadvantages of solar refrigeration system.