Q.22 Describe air refrigeration system. Give its advantages and disadvantages.
Q.23 Explain the various parts of vapour Compression refrigeration system.
Q.24 What is the effect of sub cooling the liquid on performance of a vapour compression system?
Q.25 Write the five properties of R-717.
Q.26 Define primary and secondary refrigerants. Give their examples also.
Q.27 Give five advantages of solar refrigeration system over vapour compression system.
Q.28 Explain Air Cooled Condenser.
Q.29 Give the functions of thermostat.
Q.30 Define and classify compressors.
Q.31 Explain high pressure cut-out switches.
Q.32 Explain sensible heating and sensible cooling.
Q.33 Write a short note on importance of psychrometry.
Q.34 Write the properties of an Ideal Refrigerant.
Q.35 Write a short note on central air conditioning.

SECTION-D

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

Q.36 Explain Vapour Absorption Refrigeration system with the help of a neat sketch.
Q.37 Describe evaporators and give their classification. Explain any one of them in detail.
Q.38 Explain split type air conditioning system with the help of neat sketch. Give its advantages.

Roll No. .....

5th Sem. / Mech. Engg. (MSIL)

Subject : Refrigeration and Air Conditioning

Time : 3 Hrs. M.M. : 100

SECTION-A

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

Q.1 Efficiency of the Refrigerator is _____ to the C.O.P. of the refrigerator.
a) Independent
b) Directly proportional
c) Inversely proportional
d) Equal

Q.2 Which of the following is the S.I. unit to measure pressure in refrigeration?
a) Bar b) Newton
c) Joule d) Pascal

Q.3 Which of the following process is used in winter air conditioning?
a) Cooling and Dehumidification
b) Heating and Humidification
c) Dehumidification
d) Humidification

Q.4 When refrigerants take a direct part in the refrigeration system, then these types of refrigerants are called?

a) Primary b) Secondary

c) Tertiary d) Mixed

Q.5 What does azeotrope mean?

a) Type of molecule b) Type of bond

c) Stable mixture d) Unstable mixture

Q.6 What is the pressure at the inlet of a refrigerant compressor?

a) Critical pressure

b) Suction pressure

c) Discharge pressure

d) Backpressure

Q.7 Why is the evaporator used?

a) To absorb heat

b) To decrease the refrigeration effect

c) To reject heat

d) To improve C.O.P.

Q.8 Which of the following represents sensible cooling on the psychrometric chart?

a) Inclined Line b) Curve

c) Horizontal line d) Vertical line

Q.9 Which of these refrigerants is highly flammable and toxic?

a) R-12 b) Sulphur Dioxide

c) Carbon Dioxide d) Ammonia

Q.10 In a Vapour compression cycle, where do we find the lowest temperature?

a) Evaporator (b) Expansion valve

(c) Condenser (d) Compressor

SECTION-B

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

Q.11 Define refrigeration.

Q.12 Give full form of C.O.P.

Q.13 Write the function of suction line in simple vapour compression system.

Q.14 Give classification of refrigerants.

Q.15 Give the function of generator in vapour absorption system.

Q.16 Give the other name of domestic Electrolux refrigeration system.

Q.17 Give name of any two types of condenser.

Q.18 Define air purification?

Q.19 Write the use of comfort chart.

Q.20 Name the refrigerant commonly used in window air-conditioner.

SECTION-C

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

Q.21 Differentiate between C.O.P. and efficiency.