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1st Sem, Level 5 / DVOC (Ref. & Air Cond.)

Subject : Basics of Refrigeration

Time : 2 Hrs. M.M. : 50

SECTION-A

Note: Very short questions. Attempt all ten questions. (10x1=10)

Q.1 What is the Unit of refrigeration and its formula?

Q.2 What is dry ice?

Q.3 Define COP.

Q.4 What is ideal cycle in refrigeration and why?

Q.5 What is dry compression?

Q.6 Name the processes in Bell Coleman cycle.

Q.7 Define refrigeration.

Q.8 What are secondary refrigerants?

Q.9 What is the principle of thermo-electric refrigeration?

Q.10 Define latent heat as of refrigerant in evaporator?

SECTION-B

Note: Short answer type questions. Attempt any six questions out of eight questions. (6x5=30)

Q.11 What are conditions of COP for its maximum value?

Q.12 Explain standard vapour compression cycle with PV diagram.

Q.13 Explain Ice refrigeration with neat sketch.

Q.14 What is subcooling of refrigerant and its effects in vapour compression cycle?

Q.15 Write short note on superheated compression and the advantage of it.

Q.16 Explain the construction and working of vapour absorption cycle.

Q.17 Explain the function of heat exchanger and rectifier in actual vapour absorption cycle.

Q.18 Explain the effect of varying pressure on COP of vapour compression cycle.

SECTION-C

Note: Long answer type questions. Attempt any one question out of two questions. (1x10=10)

Q.19 Give the properties of a good or ideal refrigerant.

Q.20 A refrigerating machine working on reversed carnot cyclem consumes 4KW for producing refrigerating effect of 800 kJ/min at -35 degree centigrade. Find

a) The coefficient of performance

b) The temperature of heat sink (higher)