

- Q.17 Explain in brief various methods of refrigeration.
- Q.18 Explain domestic Electrolux refrigerator working on vapour absorption cycle?

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Level 5, 1st Sem. / DVOC (Ref. & Air Cond.)
Subject : Basics of Refrigeration

SECTION-D

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

- Q.19 Explain vapour compression refrigeration system with neat sketch.
- Q.20 Write a short note on

- a) Explain vapour absorption system with neat sketch
- b) Classification of refrigerants.

Time : 2 Hrs.

M.M. : 50

SECTION-A

Note: Multiple choice questions. All questions are compulsory (5x1=5)

- Q.1 One ton of refrigeration is equal to
 - a) 120kj/min
 - b) 620kj/min
 - c) 420kj/min
 - d) 210kj/min
- Q.2 The ratio of heat extracted in the refrigerator to the work done on the refrigerator is called as:
 - a) C.O.P of heat pump
 - b) C.O.P of heat engine
 - c) Refrigerating efficiency
 - d) C.O.P of refrigerator
- Q.3 The refrigerant widely used in window air-conditioner is:

(80)

(4)

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(1)

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- a) R-12
- b) R-22
- c) R-717
- d) R-744

Q.4 Sub cooling is the process of cooling the refrigerant in vapour compression system

- a) After compression
- b) Before compression
- c) Before throttling
- d) After throttling

Q.5 Vapour absorption system makes use of:

- a) Kinetic energy
- b) Potential energy
- c) Mechanical energy
- d) Heat energy

SECTION-B

Note: Objective/ Completion type questions. All questions are compulsory. $(5 \times 1 = 5)$

Q.6 Define C.O.P

Q.7 What is the function of evaporator in Vapour compression system

Q.8 Name any two primary refrigerants

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Q.9 What is the function of expression valve in refrigerator

Q.10 Which refrigerant is used in vapour absorption system.

SECTION-C

Note: Short answer type questions. Attempt any six questions out of eight questions. $(6 \times 5 = 30)$

Q.11 Define term refrigeration. Also mention its few applications.

Q.12 Explain Bell Coleman cycle of refrigeration.

Q.13 Explain in brief effects of sub cooling and super heating the refrigerant.

Q.14 What are the desirable qualities of good refrigerant.

Q.15 Explain secondary refrigerants with examples.

Q.16 A carnot cycle machine operates between temperature limit of 47 degree Celsius and -30 degree Celsius. Determine C.O.P when it operates as

- a) A refrigerating machine
- b) A heat engine

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