UNIT–1: Vapour Compression Refrigeration System (VCRS)

1. The main components of a vapor compression refrigeration system are:

A) 2
B) 3
C) 4
D) 5

2. The four main components of VCRS are:

A) Compressor, Condenser, Expansion Valve, Evaporator
B) Boiler, Turbine, Pump, Condenser
C) Compressor, Generator, Absorber, Evaporator
D) Fan, Filter, Heater, Cooler

3. The function of the compressor is to:

A) Reduce pressure
B) Increase refrigerant pressure
C) Condense refrigerant
D) Cool refrigerant

4. The refrigerant enters the compressor as:

A) High-pressure liquid
B) Low-pressure vapor
C) High-pressure vapor
D) Saturated liquid

5. The refrigerant leaves the compressor as:

A) Low-pressure vapor
B) High-pressure vapor
C) Low-pressure liquid
D) Saturated liquid

6. The condenser is used to:

A) Absorb heat
B) Reject heat to surroundings
C) Increase pressure
D) Reduce pressure

7. In the condenser, refrigerant changes from:

A) Liquid to vapor
B) Vapor to liquid
C) Solid to liquid
D) Liquid to solid

8. The expansion valve is used to:

A) Increase temperature
B) Increase pressure
C) Reduce pressure
D) Condense refrigerant

9. The process occurring in the expansion valve is:

A) Compression
B) Condensation
C) Throttling
D) Evaporation

10. The evaporator is used to:

A) Reject heat
B) Absorb heat
C) Increase pressure
D) Store refrigerant

11. Refrigeration effect is produced in the:

A) Compressor
B) Condenser
C) Evaporator
D) Receiver

12. The refrigerant enters the evaporator as:

A) Low-pressure liquid-vapor mixture
B) High-pressure vapor
C) High-pressure liquid
D) Dry saturated vapor

13. The refrigerant leaves the evaporator as:

A) High-pressure liquid
B) Low-pressure vapor

C) High-pressure vapor
D) Saturated liquid

14. The COP of a refrigerator is:

A) Work Input / Refrigeration Effect
B) Refrigeration Effect / Work Input
C) Heat Rejected / Work Input
D) Heat Absorbed / Heat Rejected

15. A higher COP indicates:

A) Lower efficiency
B) Higher efficiency
C) More power consumption
D) Less refrigeration effect

16. Which component consumes maximum power in VCRS?

A) Evaporator
B) Condenser
C) Compressor
D) Expansion Valve

17. The refrigerant commonly used in domestic refrigerators is:

A) R-717
B) R-134a
C) Water
D) Air

18. The condenser is generally cooled by:

A) Air or water
B) Steam
C) Oil
D) Fuel

19. The vapor compression system is preferred because of:

A) Low COP
B) High COP
C) High maintenance
D) High noise

20. The cycle used in VCRS is based on:

A) Rankine Cycle
B) Carnot Cycle
C) Otto Cycle