

Unit 3
Vapour Absorption Refrigerator

1. VAR system works mainly on:

- A) Mechanical energy
- B) Electrical energy
- C) Heat energy
- D) Nuclear energy

2. Common refrigerant in VAR system is:

- A) R134a
- B) Ammonia
- C) Water
- D) CO₂

3. Absorbent used in ammonia-water system is:

- A) Lithium bromide
- B) Water
- C) Oil
- D) Air

4. VAR system replaces:

- A) Condenser
- B) Compressor
- C) Evaporator
- D) Expansion valve

5. In VAR system, generator is used to:

- A) Cool refrigerant
- B) Absorb refrigerant
- C) Separate refrigerant from solution
- D) Expand refrigerant

6. Absorber function is to:

- A) Compress refrigerant
- B) Absorb refrigerant vapor
- C) Expand refrigerant
- D) Heat refrigerant

7. VAR system is driven by:

- A) Diesel engine
- B) Electric motor
- C) Waste heat/steam
- D) Solar panels only

8. COP of VAR system is generally:

- A) Very high
- B) Higher than VCR
- C) Low
- D) Infinite

9. Refrigerant in LiBr-H₂O system is:

- A) Lithium bromide
- B) Water
- C) Ammonia
- D) Air

10. VAR system is also called:

- A) Steam jet refrigeration
- B) Thermal compression system
- C) Mechanical system
- D) Gas cycle system

11. Expansion valve in VAR system reduces:

- A) Temperature only
- B) Pressure only
- C) Both pressure and temperature
- D) Volume only

12. Evaporator in VAR system:

- A) Rejects heat
- B) Absorbs heat
- C) Compresses refrigerant

D) Condenses vapor

Answer: B) Absorbs heat

13. Strong solution means:

A) More refrigerant absorbed

B) Less refrigerant absorbed

C) No refrigerant

D) Solid state

14. Weak solution means:

A) No refrigerant

B) More absorbent

C) Less refrigerant concentration

D) Solid solution

15. Heat is supplied in VAR system at:

A) Evaporator

B) Absorber

C) Generator

D) Condenser

16. VAR system is suitable for:

A) Small domestic use

B) Large industrial plants

C) Cars only

D) Portable devices

17. Main advantage of VAR system is:

A) High efficiency

B) Uses waste heat

C) Low cost electricity

D) Very compact

18. Main disadvantage of VAR system is:

- A) High COP
- B) No compressor
- C) Bulky and low efficiency
- D) No cooling effect

19. In absorber, heat is:

- A) Added
- B) Removed
- C) Not involved
- D) Stored

20. VAR system is eco-friendly because:

- A) Uses ammonia only
- B) Uses CFC gases
- C) Uses waste heat energy
- D) Uses electricity only