



SNS COLLEGE OF TECHNOLOGY

(An Autonomous Institution, Affiliated to Anna University)

Coimbatore – 641 035.



Puzzle Questions

Unit II

Vapor Compression Refrigeration (VCR)

- 1. Energy Transformation:** *I take low-pressure vapor, compress it into high-pressure vapor, and then send it to the condenser. What am I?*
 - **Answer:** Compressor.
- 2. Heat Exchanger:** *I'm where the refrigerant releases heat and condenses into a liquid after being compressed. What am I?*
 - **Answer:** Condenser.
- 3. Cooling Champion:** *I'm the part of the system that absorbs heat from the environment, causing the refrigerant to evaporate and cool the surrounding air. What am I?*
 - **Answer:** Evaporator.
- 4. Flow Controller:** *I regulate the refrigerant flow into the evaporator, ensuring the system runs efficiently and preventing liquid from reaching the compressor. What am I?*
 - **Answer:** Expansion valve (or TXV).
- 5. Phase Change Puzzle:** *I'm the process that occurs in the evaporator when the refrigerant absorbs heat and changes from liquid to gas. What am I?*
 - **Answer:** Evaporation.

Vapor Absorption Refrigeration (VAR)

- 6. Heat Absorber:** *In my system, I absorb heat from the surroundings, using a refrigerant to create a cooling effect. What am I?*
 - **Answer:** Evaporator.

7. **Cooling Agent:** *I am the substance that, when heated, leaves an absorbent solution to return to the gas phase. Often, I'm ammonia or water. Who am I?*
 - **Answer:** Refrigerant.
8. **Energy Source:** *I provide the necessary heat to drive the generator in an absorption refrigeration system. What am I?*
 - **Answer:** Heat source (could be waste heat, steam, or solar energy).
9. **Liquid Management:** *I am the device that separates refrigerant vapor from the absorbent in the generator, allowing the refrigerant to be condensed again. What am I?*
 - **Answer:** Generator.
10. **Cycle Dynamics:** *In a vapor absorption system, I absorb refrigerant vapor, creating a concentrated solution, while my counterpart evaporates. Who am I?*
 - **Answer:** Absorber.