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**D.M.E. 4<sup>th</sup> SEM**  
**THERMAL-ENGINEERING(3341902)**  
**FREQUENTLY ASKED QUESTIONS (FAQ)**

**TWO PHASE SYSTEM**

1. Explain two phase system
2. Define triple point.
3. Define evaporation.
4. Define following
  - a.i) Saturation temperature
  - a.ii) Superheated temperature
  - a.iii) Degree of superheat
  - a.iv) Wet steam
  - a.v) Dry saturated steam
  - a.vi) Superheated steam
  - a.vii) Dryness fraction
5. Explain mollier chart.

**STEAM PRIME MOVERS**

1. Explain meaning of prime mover and give name of five prime movers.
2. Define nozzle.
3. Define nozzle efficiency
4. Explain principle of impulse effect.
5. Explain principle of reaction effect.
6. Give and state working of nozzle, fixed blade and moving blade for steam turbine.
7. What is compounding of steam turbine.

**STEAM CONDESER AND COOLING TOWER**

1. Define condenser.
2. Explain principle of using condenser in steam power plant.
3. State advantages of jet condenser
4. State disadvantages of jet condenser.
5. Compare jet condenser and surface condenser.
6. Explain effect of air leakage in condenser.
7. State advantages of hyperbolic cooling tower.

### **AIR COMPRESSOR**

1. Describe single acting reciprocating compressor.
2. Explain effect of clearance in reciprocating air compressor.
3. Define multi stage compression.
4. Explain meaning of inter cooling.
5. What is after cooler .
6. State advantages and disadvantages of vane blower.
7. State advantages and disadvantages of roots blower.
8. State advantages and disadvantages of centrifugal compressor.

### **BOILER**

1. Give the introduction of boilers.
2. Give the classification of the boiler.
3. Explain simple vertical boiler.
4. Explain Lancashire boiler .
5. Explain Babcock Wilcox boiler.
6. Explain Boiler mounting accessories.
7. Boiler draught system concept and classification.
8. Explain FBC.

### **HEAT TRANSFER**

1. Give the definition of following:
  - a) Conduction
  - b) Convection
  - c) Radiation
  - d) Thermal conductivity
  - e) Emissivity
2. Explain the Fourier's law.
3. Explain the Heat Transfer Through a composite wall.
4. Difference between hot and cold insulation.
5. Give the types of Heat exchanger and its application.
6. What is LMTD?