

**PARUL UNIVERSITY**  
**FACULTY OF ENGINEERING & TECHNOLOGY**  
**Diploma Engineering, Mid semester Examination**

Semester: 3<sup>rd</sup>

Subject Code: (03613207)

Subject Name: (Basic Engineering Thermodynam)

Date: (10/08/2022)

Time: (1hr: 30min)

Total Marks: 40

**Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.
4. English version is considered to be Authentic.

- Q.1 Answer any six out of Ten. (2 Marks Each) (12)**
1. Define Entropy.
  2. What is Specific Entropy? Give SI units.
  3. Define Enthalpy with its related SI units.
  4. Give Definition of Internal Energy.
  5. What is Mechanical Equilibrium?
  6. Give Definition of Thermodynamics.
  7. Give Definition of Moveable Boundary with example.
  8. Give definition of Absolute Zero Temperature with units.
  9. Give definition of Specific Heat.
  10. Give Statement of Conversion of Energy.
- Q.2 A) Explain Temperature Measurement Devices. (03)**
- OR**
- A) Explain Shaft work with proper figure. (03)
- B) Give Different Statement of First Law of Thermodynamics. (03)
- OR**
- B) Explain Control Volume. (03)
- C) Which type thermodynamic system & boundary fluid flow in Pipe? Explain with figure. (04)
- OR**
- C) Which type thermodynamic system & boundary boiled water in Filled Air in Ballon? Explain with figure (04)
- D) Explain Joule's Experiments with proper Figure. (04)
- Q.3 A) Explain Reversible Process with example. (03)**
- OR**
- A) Explain Irreversible Process with example. (03)
- B) What is Intensive Property? Give Example. (03)
- OR**
- B) Proof Internal Energy is Property. (03)
- C) Derive Steady Flow Energy Equation. (04)
- OR**
- C) Differentiate between Point Function and Path function. (04)
- D) Classification of Thermodynamics System. Explain Isolated System with example. (04)