

Seat No: _____

Enrollment No: _____

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

Semester: 3rd

Subject Code: 03612209

Subject Name: Thermodynamics and Hydraulics

Date: (02/08/2022)

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 System.
2. Define Boundary.
3. Define Open system.
4. State first law of thermodynamics.
5. What is Heat?
6. What is thermodynamics?
7. Write down units of Pressure.
8. Write down units of temperature.
9. Define Work Done.
10. Define irreversible process.

Q.2 A) Explain first law of thermodynamics. (03)

OR

A) Explain open and close systems. (03)

B) Limitations of first law of thermodynamics. (03)

OR

B) Explain Joule's experiment. (03)

C) What do you mean by thermal equilibrium? (04)

OR

C) Define 1. Internal Energy 2. Entropy (04)

D) Explain Clausius Statement. (04)

Q.3 A) Define indicated thermal efficiency and Brake thermal efficiency. (03)

OR

A) Zeroth law of thermodynamics. (03)

B) Explain Kelvin Plank statement. (03)

OR

B) Define: (1) Density (2) Pressure (03)

C) Give definitions of Source and sink. (04)

OR

C) Define 1. Isobaric Process 2. Isothermal Process (04)

D) Short Note- Boundary (04)

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