Seat No: _____ Enrollment No: _____

PARUL UNIVERSITY

FACULTY OF ENGINEERING & TECHNOLOGY

Diploma Engineering, Mid semester Examination

Semester: 3rd **Date: 02/08/2022**
Subject Code: 03612209 **Time: (1hr: 30min)**
Subject Name: Thermodynamics and Hydraulics **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 Universe
2. Define Surrounding
3. Define Close system.
4. State first law of thermodynamics.
5. What is Heat?
6. What is thermodynamics?
7. Write down unit of Force
8. Write down units of Work.
9. Define Work Done.
10. Define reversible process.

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

OR

A) Explain isolated and close systems. **(03)**
B) Explain Clausius Statement. **(03)**

OR

B) Explain Joule's experiment. **(03)**
C) Give definitions of Source and sink. **(04)**

OR

C) Define 1. Internal Energy 2. Enthalpy **(04)**
D)) Limitations of first law of thermodynamics. **(04)**

Q.3 A) Define Mecanical 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) What do you mean by thermal equilibrium? **(04)**

OR

C) Define 1. Isobaric Process 2. Isothermal Process **(04)**
D) Short Note- System **(04)**

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