



MECHANICAL ENGINEERING

Basic Mechanical Engineering

Hand Notes For GATE, IES, PSUs etc...

Hand Notes

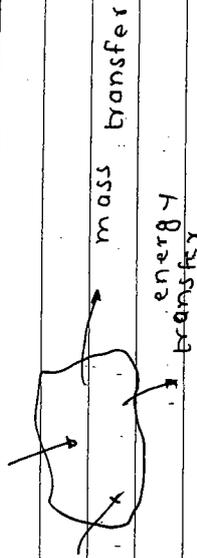
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Note : We also providing IIT JEE, Advance, NEET, JEE UG, GATE, IES, PSUs & Competitive Exam Materials [Handnotes, Shortnotes & Books], All Reports [Seminar Reports & PPT]

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Cover Topic :

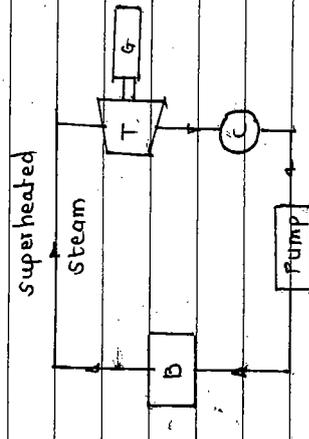
- Thermodynamics
- Free Expansion
- Heat Transfer
- Radiation
- Power Plants
- Machine Tools
- Types Of Shafts
- Bearings
- Resilience
- Power Transmission Devices
- Types Of Costing
- Welding
- Fabrication



3) Isolated system:

Are the systems where there is no energy as well as mass transfer.

eg. Thermos, thermodynamic universe.



Energy:

1) Internal energy (U) is due to molecular motion atomic structure & chemical composition

Types of internal energies:

- 1) Chemical energy
- 2) Atomic energy
- 3) molecular internal energy

2) External energy

$$1) KE = \frac{1}{2} mv^2$$

$$2) PE = mgh$$

$$E = \text{Total energy} \\ = \text{Int energy} + \frac{1}{2} mv^2 + mgh$$

Property

The thermodynamic co-ordinates representing a system are called properties of the system.

1) Intensive Properties

The properties which are independent of mass are called intensive property.

eg. pressure, density, temp, viscosity & thermal conductivity (K).