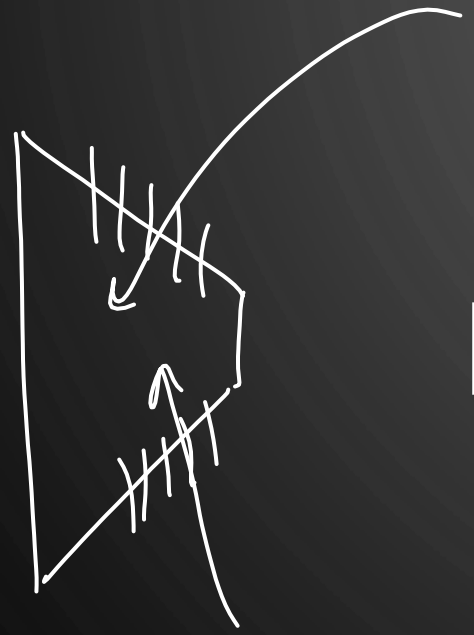


In TD → Q → KJ/J

In HT → Q → $\frac{KJ}{s}$ / $\frac{J}{s}$

↓ KW ↓ W

HEAT TRANSFER

INTRODUCTION

SYLLABUS (GATE)

- MODES OF HEAT TRANSFER
- ONE DIMENSIONAL HEAT CONDUCTION
- RESISTANCE CONCEPT AND ELECTRICAL ANALOGY
- HEAT TRANSFER THROUGH FINS
- UNSTEADY HEAT CONDUCTION
- LUMPED PARAMETER SYSTEM
- HEISLER'S CHARTS

SYLLABUS

- THERMAL BOUNDARY LAYER
- DIMENSIONLESS PARAMETERS IN FREE AND FORCED CONVECTIVE HEAT TRANSFER
- HEAT TRANSFER CORRELATIONS FOR FLOW OVER FLAT PLATES AND THROUGH PIPES
- EFFECT OF TURBULENCE; HEAT EXCHANGER PERFORMANCE
- LMTD AND NTU METHODS
- RADIATIVE HEAT TRANSFER
- STEFAN BOLTZMANN LAW
- WIEN'S DISPLACEMENT LAW
- BLACK AND GREY SURFACES VIEW FACTORS
- RADIATION NETWORK ANALYSIS

PM

4:30 to 5:30

WEIGHTAGE IN GATE

6-7 MARKS

WEIGHTAGE IN ESE

PRE – 50 → MARKS

MAINS - 40 → Marks

WEIGHTAGE IN PSU

10-12 QUESTIONS

SSC-JE

Sheet

CLASS

Tuesday to Saturday → YouTube

4:30 to 6 PM

Complete HT → Theory

Monday → App → 11 AM to 2 PM

↓

Revision + Question

Heat Transfer

In TD → Q → J or KJ

In HT → Q → $\frac{J}{s}$ or $\frac{KJ}{s}$

$\frac{J}{s}$ → W

$\frac{KJ}{s}$ → KW

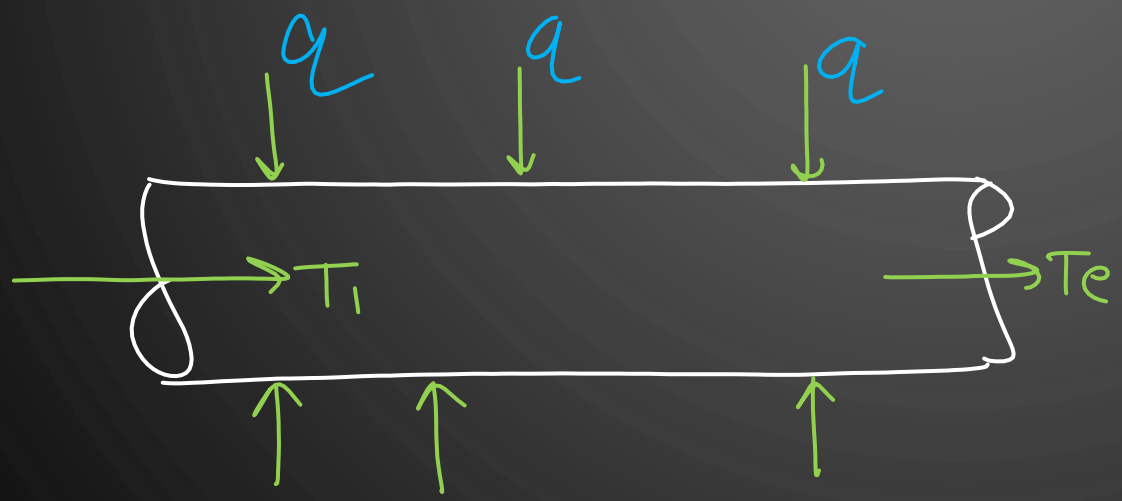
Heat Transfer deals with Rate

↓

At What rate heat going to be Transfer.

Applications of HT

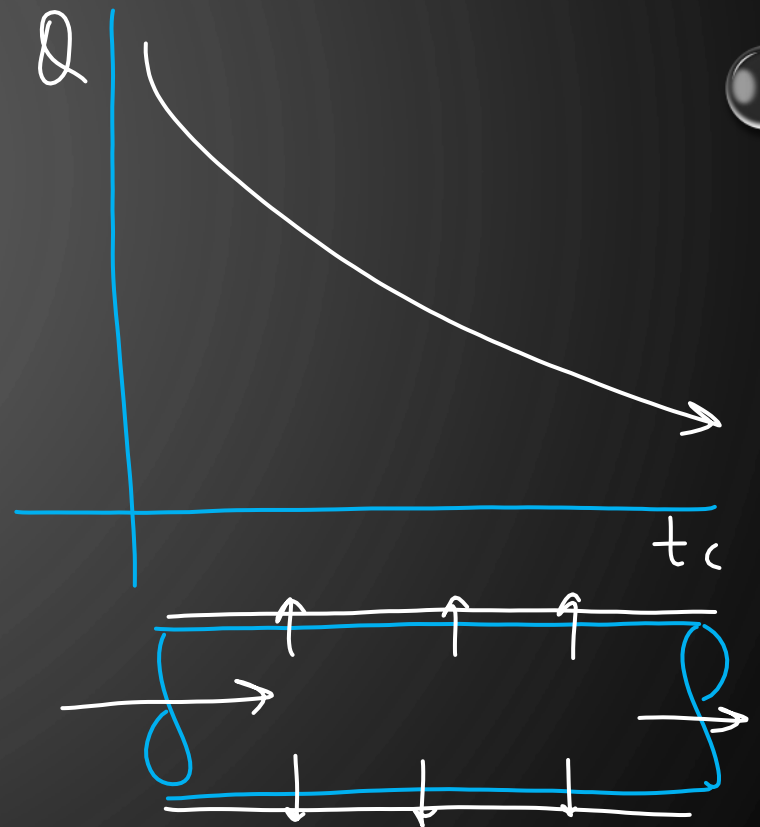
① Liquid flowing through Pipe



exit temp → T_e ?

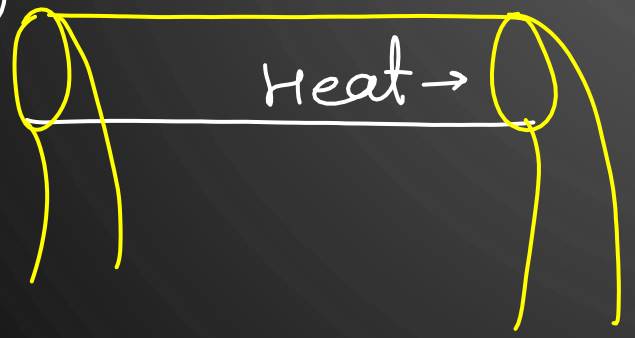
For Given T_e, Length of Tube ?

2.



⑤ Mechanical Industry

Rolling



④ Electronic Device

Heat Transfer

↓

Modes of Transfer