

6th Semester Chemical

Subject: Transport Phenomena

Instructor: Dr. M. A. Rather

Book: Transport Phenomena by Bird , Stewart and Light Foot (BSL) John Wiley.

(if not available Pl . down load this book and its solution from our website)

➤ By Mid April topics to be covered are;

1. Tensors

Resources to be used;

- a) Pl. see video lecture; <https://www.youtube.com/watch?v=ll59nyjDq50>.
- b) Pl read chapters : Appendix A on BSL (A.1 to A.4)

2. Newton's Law and Shell Momentum balance

Resources to be used;

1. BSL (Chapter 1 and Chapter 2)
2. NPTEL Lectures on Transport Phenomena

<https://nptel.ac.in/courses/103105128/#> (Initially 1st and 2nd week lectures).

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- Lecture 1 : Introduction : Newton's Law of Viscosity
 - Lecture 2 : Fourier and Fick's Laws
 - Lecture 3 : Shell Momentum Balance
 - Lecture 4 : Example of Shell Momentum Balance
 - Lecture 5: Example of Shell Momentum Balance (Contd.)
 - [Lecture 6 : Example of Shell Momentum Balance (Contd.)
 - Lecture 7 : Example of Shell Momentum Balance (Contd.)
 - Lecture 8 : Example of Shell Momentum Balance (Contd.)
 - Lecture 9 : Equations of Change for Isothermal Systems
 - Lecture 10 : Equations of Change for Isothermal Systems (Contd.)