

T.E. (Chemical)
TRANSPORT PHENOMENA

1. Derive the Equation of Motion.
2. Derive Newton's second law of motion and extend it to derive Navier Stoke's equation of motion
3. Give significance of partial time, total time and substantial time derivative
4. Write short note on Reynolds Analogy and Prandtl Analogy.
5. Derive the correlation for binary mass transfer coefficient in two phases at low mass transfer rates.
6. Discuss transfer coefficients at high transfer rates by penetration theory
7. Explain Reynold's and Prandtl analogy
8. Derive the Continuity Equation.
9. Derive the expression for Fanning Friction factor
10. Derive expressions for friction factors for flow in tubes.
11. Use macroscopic balance equations and derive expressions of pressure rise and friction loss occurring in liquid-liquid ejector.
12. Explain Chilton - Colburn analogy.