



Sardar Beant Singh State University, Gurdaspur  
Department of Chemical Engineering & Bio Technology

Assignment No.1  
Subject: Chemical Process Simulation

**Problem 1**

Write the component continuity equation describing the CSTR (Figure 1) with

- (a) Simultaneous reaction (first order and isothermal)
- (b) Reversible first order isothermal
- (c) Series reaction in isothermal system

**Problem 2**

Write the component continuity equation for a tubular reactor (Figure 2) with consecutive reaction

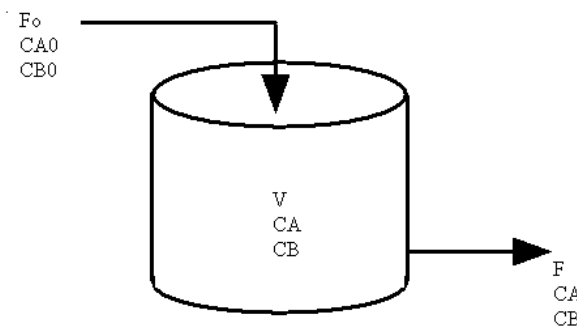


Figure 1

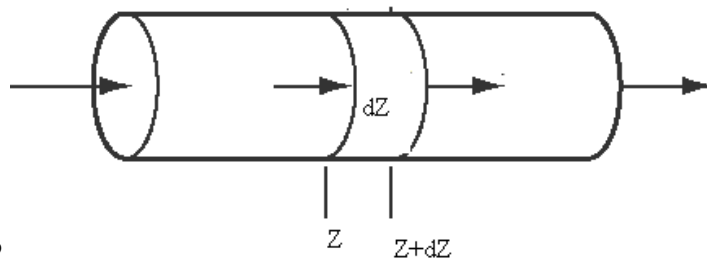


Figure2