

Unit 29. Pre-Class Quiz Questions

1. How many additional terms appear in the design equations for a CSTR that is connected in series to other CSTRs compared to a single CSTR?
 - a. 0
 - b. 1
 - c. 2
 - d. 3
 - e. there is one fewer terms
2. As the number of CSTRs in a cascade increases, the performance of the cascade approaches that of what other type of reactor?
 - a. perfectly mixed batch reactor
 - b. laminar flow reactor
 - c. plug flow reactor
 - d. single CSTR with volume equal to the total volume of the CSTRS in the cascade
 - e. recycle reactor
3. For the same reaction run isothermally at equal inlet conditions, the conversion using a single PFR
 - a. is smaller than the conversion using two PFRs that are half as large connected in series
 - b. is the same as the conversion using two PFRs that are half as large connected in series
 - c. is larger than the conversion using two PFRs that are half as large connected in series
 - d. could be larger or smaller than the conversion using two PFRs that are half as large connected in series
 - e. is double the conversion using two PFRs that are half as large connected in series
4. True or false? When designing a parallel reactor network it is advantageous to mix a stream with low conversion together with a stream with high conversion.
5. True or false? In a cascade of CSTRs, the reactors are connected in parallel.