Answer Sheet for CHE 654 Homework Set #1
(100 Points)

3. *Mass Balances and Constraints with Elementary Modules, III*

(a) (10 points)

Is the problem constrained? Circle: Yes   or   No

How many standard input are missing? ___

List the missing standard input:

_____

_____

_____

(b) (10 points)

Total conversion of parallel reactions based on B = _____

Conversion of Reaction 1 = _____

Conversion of Reaction 2 = _____

Streams	Component Flow Rates (lbmol/hr)			
	A	B	C	D
S1			0	0
S2				
S3				
S4				

5. *Mass Balances and Constraints with Elementary Modules V*

Fill in the following table: (20 points)

Streams	Component Flow Rates (lbmol/hr)			
	A	B	C	D
S1			0	0
S2				
S3				
S4				
S5				
S6				

7. *Degree of Freedom Analysis* (20 points)

There are _____ standard inputs that are missing from the problem.

There are _____ constraints in the problem.

The problem is: ☐ under-specified   ☐ fully specified   ☐ over-specified

12. *Determination of Tear Streams and Computational Order, IV* (20 points)

The minimum number of tear streams = _____

The tear stream locations are: _____

13. *Determination of Tear Streams and Computation Order, V* (20 points)

The minimum number of tear streams = _____

The locations are: _____

A complete computational sequence: _____

_____

_____