Answer Sheet for CHE654 Homework Set #2
(100 points)

7. (20 points) *Determination of Tear Streams and Computation Order, I*

   (a) The irreducible groups are: _____

      _____

      The precedence order or computational order is _____

      _____

   (b) For each irreducible group, the minimum number of tear streams and their
       locations:

      _____

      _____

      A complete computational sequence for the entire flowsheet is:

      _____

      _____

      _____

      _____

9. (10 points) *Determination of Tear Streams and Computation Order, III*

   The tear streams are: _____

   Computational order: _____

   _____

   _____

12. (10 points) *Determination of Tear Streams and Computation Order, V*

   The minimum number of tear streams = _____

The locations are: _____

A complete computational sequence: _____

_____

_____

14. (20 points) *Simulating an Allyl-Chloride Production Process with ASPEN Plus*

Overall fractional conversion of chlorine = _____

Allyl chloride product purity (mole%) = _____

Remember to submit your A+ .bkp file.

16. (20 points) *Simulation of Benzene Production Using ASPEN Plus*

Flow rate of benzene product stream = _____ lbmol/hr

Purity of benzene in the product stream = _____ mole%

Required area in the heat exchanger = _____ ft^2

17. (20 points) *Producing Cyclohexane from Benzene-Water Waste*

The purity (mole%) of cyclohexane:

Before the treatment unit = _____ %; After the treatment unit = _____ %

The required heat transfer area in the cooler = _____ ft^2

The temperature of the organic stream:

Before entering the cooler = _____ °F; After exiting the cooler = _____ °F