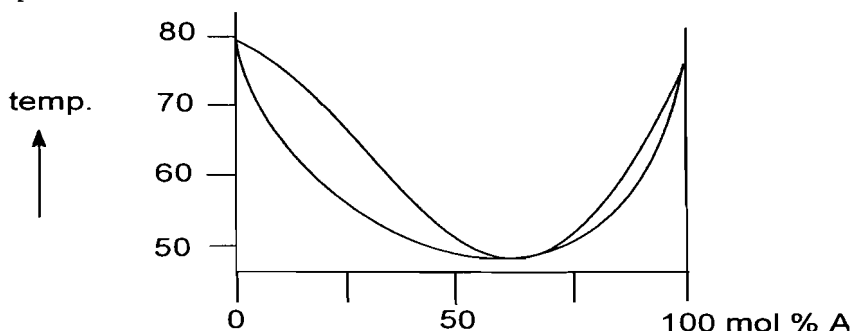


1. What is the purpose of the beads in your fractional distillation? (2 pts)

Increased surface area

2. Consider the boiling point-composition diagram below and answer the following questions:



- a. At which temperature does a mixture of 75 mol% B and 25 mol% A boil, around 55°, around 65°, or around 80°? (2 pts)

- b. If you condense the vapors given off by a boiling mixture of 75 mol% B and 25 mol% A, what composition do they have? Around 10% B, around 60% B, or more than 80% B? (2 pts)

- c. At which temperature does an azeotrope of A and B boil? (2 pts)

~ 50°

4. Indicate which statements are correct: A Fractional distillations work best when the reflux ratio is low. B The separating power of a column of given design generally doubles when its height doubles. C The boiling point of a fluid increases with increasing pressure. D The vapor pressure of a fluid increases with increasing temperature (4 pts)

5. Why did you stir the contents of your flask during distillation? (2 pts)

Assure smooth boiling

6. Why is it dangerous to get your heating mantle wet? (1 pts)

Electrical shock possible