Name _____

Chem 352 - Spring 2011
Quiz 3

1. The word "glycolysis" translates to mean "to split sugar".
   a. Using names for the reactants and products, write a *net balanced chemical equation* for glycolysis:

   b. Using *structural formulas* for the reactants and products, write the balanced chemical equation for the *aldolase* reaction in glycolysis:

   c. What class of enzyme catalyzed reactions does aldolase belong to?_____
   d. The $\Delta G°'$ for the aldolase reaction in muscle is +22.8 kJ/mol. In view of this, how is the aldolase reaction able to proceed in the direction of products?

2. The ATP produced in glycolysis is produced by substrate level phosphorylation of ADP. Name and draw the structural formulas for the the two glycolytic intermediates that are used for these substrate level phosphorylations:

   a. Name:_____ b. Name:_____

3. Three of the ten enzymes that catalyze the reactions in the glycolytic pathway are under allosteric control. Identify the three by name and name one example of a *negative allosteric effector* for each:
   a. Name: _____ Effector_____
   b. Name: _____ Effector_____
   c. Name: _____ Effector_____