Chapter 7 study guide

1. How do plants and animals differ in their method of making ATP?
2. What are the possible pathways into which pyruvate created in glycolysis can enter? 
   (Hint: Include those that happen in the human body and those that happen in bacteria and yeast)
3. Which part of the cell do the following reactions occur?
   a. Glycolysis
   b. Lactic acid fermentation
   c. Ethanol fermentation
   d. Aerobic respiration
4. Describe the process of Glycolysis.
5. Explain the role of ATP in the process of metabolism.
6. What is the energy cost and energy output from glycolysis? OR In glycolysis, __________ molecules of _______ is “invested” and _______ molecules of ________ are generated creating a net yield of 2 _______ molecules; in addition two molecules of ________ are also generated.
7. Write down the coenzyme reductions during the first two stages (Note the correction in the picture above) See the slide “Coenzyme reductions in the first two stages”.
8. Show why the fermentation pathways do not release as much energy from glucose as aerobic respiration does. (hint: breakdown to carbondioxide, ETC and what happens to NADH)
9. Fats are broken down to __________ and __________.
10. Fatty acids are broken down to __________ which enters the TCA cycle.
11. Amino acids from proteins can enter the aerobic respiration at _____________, __________ or ____________.
12. Explain why yeasts and bacteria (and muscle cells) do fermentation.
13. Explain why you cannot generate glucose from fatty acids.
14. Explain the pathway by which all three energy releasing nutrients can be converted to fat.
15. Explain how amino acids enter the central metabolic pathway.

Also use study guide at the end of each chapter!