Chapter 08 Keys to Success

Is respiration an aerobic or anaerobic process? What happens when oxygen is not present?

What is the role of NAD+ and FAD in respiration?

Are oxygen and glucose oxidized or reduced during respiration?

What are the four phases of cellular respiration? Where do they take place in human cells?

What are the inputs and outputs of glycolysis, per glucose?

How many steps are in glycolysis and what mediates each step?

What are the inputs and outputs of the prep reaction, per glucose?

What are the inputs and outputs of the citric acid cycle, per glucose?

What are the inputs and outputs of the ETC, per glucose?

What are the inputs and outputs of fermentation (in humans and yeast), per glucose?

Why is pyruvate essentially wasted in fermentation? What's the point? What is the efficiency?

What is the difference between substrate level phosphorylation and oxidative phosphorylation?

How much ATP can be produced from 1 NADH molecule? FADH2?

Overall, how efficient is respiration when comparing captured vs total glucose energy?

What do anabolism and catabolism mean? Do they require or release energy?

How must protein be processed when being used for fuel?