Answers to Kirk's Amazing Exam 3 Review Notes

Enzyme Regulation

1. D – They obey Michaelis-Menten kinetics.
2. C – Proteolytic excision of a specific peptide
3. E – B and C are correct.
4. B – The amount of subunit phosphorylation differs.
5. D – Raise the apparent value of the equilibrium constant, L
6. E – Both B and C are correct.
7. A – Positive homotropic effector
8. B – Hb binds O_2 more tightly than Mb.
9. C – Heme; Fe; porphyrin; affinity
10. A – Right; deoxyHb; humans and other primates
11. D – The saturation curve of Hb for O_2 is displaced to the left (greater binding) as acidity increased.

Metabolism

1. D – A free-flow unregulated process
2. B – Organic carbon sources and oxidation-reduction reactions
3. D – Endergonic; exergonic; ATP; NADPH
4. A – F-6-P to FBP in glycolysis

Carbohydrates

Glycolysis Phases 1 and 2

1. E – net production of four ATP per glucose
2. B, D, A, C, E
3. A – The large positive energy is important in getting the pathway started.
4. A – Glucokinase acts on glucose only at high glucose concentrations.
5. D – The reaction is irreversible with a large negative delta G.
6. C – Phosphofructokinase (PFK)
7. E – All are true.
8. C – Glucose-6-phosphate (G-6-P) by inhibition.
9. B – ADP; ATP
10. C – Four; two; two
11. F – Both C and D.

Gluconeogenesis

1. D – Glucose from non-carbohydrate precursors
2. B – Acetate
3. C – Liver; kidneys
4. F – A, B, and E
5. F – Fructose-1,6-bisphosphate + H_20 → fructose-6-P + P_i
6. E – Glucose-6-phosphatase
7. G – Both C and E
8. B – Pyruvate carboxylase
9. C – Shares the load of exercising muscle; NAD^+/NADH ratio