***CHEM-115 Quiz 5 (Chapter 8) October 20, 2017***

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Section: \_\_\_\_\_\_

1. Enzymes increase the rate of a biochemical reaction by \_\_\_\_\_\_\_\_\_\_\_\_\_\_.
2. increasing the temperature (T) d) decreasing activation energy (EA)
3. decreasing the change in enthalpy (ΔH) e) increasing reactant concentration
4. increasing the kinetic energy of molecules

1. In an exothermic reaction, the change in enthalpy (ΔH) would give a \_\_\_\_\_\_\_\_\_\_ value.

a) positiveb) negativec) neutrald) a or b

1. How does increasing temperature increase reaction rate?
2. Molecular collisions are more frequent c) Molecular collisions are more properly oriented
3. Molecular collisions have more force d) a & b e) b & c
4. Balance the following neutralization reaction shown below: (2 pts)

\_\_\_\_\_\_ Al(OH)3 (aq) + \_\_\_\_\_\_\_H3PO4 (aq) → \_\_\_\_\_ H2O (l) + \_\_\_\_\_ AlPO4 (aq)

1. How many *grams* of carbon dioxide (CO2, 44.01 g/mol) are formed if 50.0 grams of ribose (C5H10O5, 150.13 g/mol) are completely combusted? (5 pts)

***CHEM-115 Quiz 5 (Chapter 8) October 20, 2017***

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Section: \_\_\_\_\_\_

1. Enzymes increase the rate of a biochemical reaction by \_\_\_\_\_\_\_\_\_\_\_\_\_\_.
2. increasing the activation energy (EA) d) decreasing activation energy (EA)
3. decreasing the change in enthalpy (ΔH) e) increasing reactant concentration
4. increasing the kinetic energy of molecules
5. In an exothermic reaction, the change in enthalpy (ΔH) would give a \_\_\_\_\_\_\_\_\_\_ value.

a) positiveb) negativec) neutrald) a or b

1. How does increasing temperature increase reaction rate?
2. Molecular collisions are more frequent c) Molecular collisions are more properly oriented
3. Molecular collisions have more force d) a & b e) b & c
4. Balance the following neutralization reaction shown below: (2pts)

\_\_\_\_\_\_ Al(OH)3 (aq) + \_\_\_\_\_\_\_H3PO4 (aq) → \_\_\_\_\_ H2O (l) + \_\_\_\_\_ AlPO4 (aq)

1. How many *grams* of carbon dioxide (CO2, 44.01 g/mol) are formed if 50.0 grams of ribose (C5H10O5, 150.13 g/mol) are completely combusted? (5 pts)

***CHEM-115 Quiz 5 (Chapter 8) October 20, 2017***

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Section: \_\_\_\_\_\_

1. A catalyst can increase the rate of a biochemical reaction by \_\_\_\_\_\_\_\_\_\_\_\_\_\_.
2. decreasing the activation energy (EA) d) increasing activation energy (EA)
3. decreasing the change in enthalpy (ΔH) e) increasing reactant concentration
4. decreasing the kinetic energy of molecules
5. How does increasing temperature increase reaction rate?
6. Molecular collisions are more frequent c) Molecular collisions have more force
7. Molecular collisions are properly oriented d) a & b e) a & c
8. Balance the following neutralization reaction shown below: (2 pts)

\_\_\_\_\_\_\_ Fe2O3(s) + \_\_\_\_\_\_\_C(s) → \_\_\_\_\_ Fe(s) + \_\_\_\_\_ CO2(g)

1. In an endothermic reaction, the change in enthalpy (ΔH) would give a \_\_\_\_\_\_\_\_\_\_ value.

a) positiveb) negativec) neutrald) a or b

1. How many *grams* of carbon dioxide (CO2, 44.01 g/mol) are formed if 30.0 grams of erythrose (C4H8O4, 120.10 g/mol) are completely combusted? (5 pts)

***CHEM-115 Quiz 5 (Chapter 8) October 20, 2017***

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Section: \_\_\_\_\_\_

1. A catalyst can increase the rate of a biochemical reaction by \_\_\_\_\_\_\_\_\_\_\_\_\_\_.
2. decreasing the activation energy (EA) d) increasing activation energy (EA)
3. decreasing the change in enthalpy (ΔH) e) increasing reactant concentration
4. decreasing the kinetic energy of molecules
5. How does increasing temperature increase reaction rate?
6. Molecular collisions are more frequent c) Molecular collisions have more force
7. Molecular collisions are properly oriented d) a & b e) a & c
8. Balance the following neutralization reaction shown below: (2 pts)

\_\_\_\_\_\_\_ Fe2O3(s) + \_\_\_\_\_\_\_C(s) → \_\_\_\_\_ Fe(s) + \_\_\_\_\_ CO2(g)

1. In an endothermic reaction, the change in enthalpy (ΔH) would give a \_\_\_\_\_\_\_\_\_\_ value.

a) positiveb) negativec) neutrald) a or b

1. How many *grams* of carbon dioxide (CO2, 44.01 g/mol) are formed if 30.0 grams of erythrose (C4H8O4, 120.10 g/mol) are completely combusted? (5 pts)