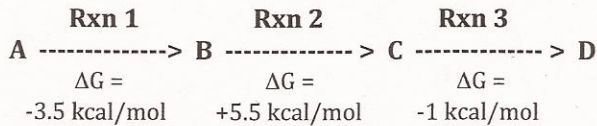


Name: _____

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16. When referring to membrane glycolipids and glycoproteins, the term "glyco-" indicates
- nonpolar carbohydrate groups that are attached to the molecules.
 - polar carbohydrate groups that are attached to the molecules.**
 - the molecules that are found on both the interior and exterior of the membrane.
 - the molecules that are attached to the membrane by ionic bonds.



In the above hypothetical metabolic pathway, molecule A is converted to molecule D via 3 reactions (Rxn 1, 2 and 3). Answer the next three questions based on this hypothetical pathway.

17. Which statement is TRUE about the reactions in the pathway?
- Reaction 1 is exergonic and hence requires energy.
 - Reaction 2 is exergonic and hence requires energy.
 - Reaction 1 is endergonic and hence requires energy.
 - Reaction 2 is endergonic and hence requires energy.**
18. Which statement is TRUE about the metabolic pathway?
- The pathway is anabolic.**
 - The pathway is catabolic.
 - Reaction 2 is exergonic.
 - both a and c.
19. Molecule D is an allosteric inhibitor of the enzyme that catalyzes Rxn 1. This is an example of _____, and when it happens molecule ___ will accumulate.
- feedback inhibition, A**
 - feedback inhibition, B
 - the lock and key model, A
 - the lock and key model, B
20. When ATP is split into ADP and P_i ,
- the energy is released in the form of heat.
 - the energy is directly transferred to the target molecule by an unknown mechanism.
 - the binding of ADP or P_i to the target molecule allows the energy of ATP hydrolysis to be transferred to the target molecule.**
 - the two remaining phosphates acquire the energy that had been present in the linkage of three phosphates.
21. Dr. Weadge spoke to the class about membrane transport systems in bacteria and their biological importance. Why is it important to understand the mechanism by which sugars are transported out of bacterial cells to form the capsule?
- To understand how ATP is used by the cell.
 - Capsules are important for the formation of Biofilms.**
 - All transport mechanisms are similar, and bacteria offer an easy model system to work with.
 - To understand the mechanisms of facilitated diffusion.