

EXAM EXPECTATIONS

AP Biology

“Unit 8 Cellular Energetics”

SUGGEST why glycolysis is believed to be the most ancient pathway of ATP production

DISCUSS changes in entropy that occur as an organism grows and relate these changes back to the 2nd Law of Thermodynamics

DISCUSS the relationships between substrates, enzymes, products and inhibitors in a chemical reaction

DISCUSS Engelman's Experiment

DISCUSS carbon fixation in c3 plants versus c4 plants

DISCUSS the role of pigments and how we perceive the color of an object

DISCUSS the relationship between photosynthesis and cell respiration

EXPLAIN how the amount of heat liberated from the same chemical reaction might be vary depending on its location (a test tube and a living cell)

EXPLAIN glycolysis

EXPLAIN how weight is lost when someone diets

EXPLAIN the roles of photosystem I and photosystem II

EXPLAIN photosynthesis

EXPLAIN cellular respiration

EXPLAIN the role and mechanisms of enzymes

EXPLAIN chemiosmosis

EXPLAIN how CAM plants can close their stomates during sunlight hours

PREDICT cellular conditions (types of metabolic pathways) that might lead to an increased level of ATP

PREDICT the number of carbons released from the complete oxidation of a given molecular formula

DETERMINE reactants or products in a given metabolic pathway