

Biology – Final Exam Study Guide – 1st Semester

****+10 points on Final Exam score if a completed, 8-page study guide is turned in on test day, signed****

ECOLOGY

Food webs

Producers, consumers

Community, population, species, ecosystem, biosphere

Trophic levels, energy pyramid

Carbon cycle, greenhouse effect, water cycle

Biomes

Biotic, abiotic factors in an ecosystem, relationships between both

Marine biomes, intertidal, coastal, oceanic zones

Photic zone, aphotic zone

Population statistics: birth rates, death rates, competition, demographic transition

Logistic growth, exponential growth, causes of each, what the graphs look like

PHYSIOLOGY

Nervous system (nerve cells, neurotransmitters, synapse, reflexes, feedback loops)

Digestive system (process of digestion and absorption of nutrients)

Excretory System (how the body gets rid of wastes)

Immune System (viruses, vaccines, AIDS, immune response)

Circulatory System (oxygen transport, carbon dioxide removal, nutrient and waste transport)

Respiratory System (gas exchange between body and environment, oxygen, carbon dioxide)

Endocrine System (hormones, glands and what they do, nervous system/endocrine/metabolism)

CELLS

Cell membranes (structure, active/passive transport)

Prokaryotic cells (structure/function, types)

Eukaryotic cells (structure/function, types)

Organelles (know the 13 different organelles and what they do in a cell)

Plant/Animal cells (compare & contrast)

PHOTOSYNTHESIS/CELLULAR RESPIRATION

Equation of photosynthesis & respiration

Autotrophs/heterotrophs

ATP/ADP (structure, how they are made/unmade, what does the body use them for)

Chlorophyll, light-dependent reactions, photosystem I & II, Calvin Cycle, chloroplast structure

Mitochondria structure, purpose

Glycolysis, fermentation

Krebs Cycle, Electron Transport chain

*****You may create EIGHT PAGES of notes (front and back) to use on the final exam.***

MUST be handwritten (your own) and stapled to this page with your name on each page. You will turn in after the exam. No Xerox copies, no computer printed work, no old assignments.

Parents, this is just to make you aware of your student's upcoming Final Exam, and the work they need to do to prepare for it. The Final Exam is cumulative, covering everything from the beginning of the year. It will have 75 multiple-choice questions, and a failing grade on the Final may result in a failing grade for the Semester.

Parent Signature: _____