

# **MIDTERM EXAM 1 Review- PHYSICAL ANTHROPOLOGY**

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Fall 2015

**Date: Monday October 12, 2015**

**Please a #2 pencil, a pen, several sheets of blank paper for your essays AND one pre-written (typed) essay. An #882 scantron will be provided. To study for the midterm, review quizzes 1-4, lectures 1-4, The PowerPoint: "How the Bough Bends: Users of Donated Gametes," chapters 1-4 and assigned readings.**

## **Terms to Be Familiar With:**

Branches of Physical Anthropology

Scientific Method

Paleoanthropology

Uniformitarianism/Catastrophism

Stratigraphy

Creationism – Intelligent Design--Theory of Acquired Characteristics

Punctuated Equilibrium—Stephen Jay Gould

Data gathering for science vs. religion (empirical methods vs. belief systems)

Forensic Anthropology

Genetic relatedness necessary for producing live offspring

Stem Cells

Eukaryote Cell / Prokaryote Cell

Bases of DNA

Polygenic/Monogenic Traits

Sickle Cell Trait / Sickle Cell Anemia

Evolutionary relationship between humans, apes, and monkeys

Cuvier, Malthus, Wallace, Lyell, Linnaeus, Lamarck, Mendel, Darwin

Chromosomes – Nucleus – Locus – Alleles – Zygote – Gamete

Principle of Segregation/ Principle of Independent Assortment

Peppered Moths (Industrial Melanism)

Natural Selection/Sexual Selection

Cell Division (Mitosis / Meiosis)

What determines sex of a mammalian offspring?

Balanced Polymorphism

Genetic Equilibrium (Hardy-Weinberg Equilibrium)

Genetic Drift / Founder Principle/Gene Flow/Genetic Bottleneck

Endogamy / Exogamy

Genotype / Phenotype

Heterozygous / Homozygous

Dominant / Recessive

Mutation—Macromutation

Homologous / Analogous Features

Ecological Specialization

Assortative Mating

Mate Guarding  
 Adaptive Radiation/Preadaptation  
 Allopatric / Sympatric  
 Microevolution / Macroevolution  
 Reproductive Isolating Mechanisms  
 Tach Sachs Disease  
 Parallel / Convergent Evolution  
 Cloning  
 Anthropocentrism  
 Endogamy/Exogamy  
 ABO blood type system  
 Laws of Chemistry – Four Personality Types  
 Attraction vs. Attachment – brain chemistry associated with each  
 Monandry  
 Serial Monogamy

**Essays: Answer THREE of these in a brief paragraph and ONE of these as a 1 ½ to 2 page typed (double-spaced) take-home essay exam.**

1. Considering our Mate Selection Exercise, what trends stood out and why?
2. Compare and contrast Darwinian Gradualism with Punctuated Equilibrium. How are the roles of mutation and natural selection considered in each of these?
3. What physical qualities are considered measures of beauty/attractiveness amongst humans? How do female preferences differ from male ones?
4. What are some examples of assisted reproductive technologies? What are the benefits and liabilities of using them?
5. What is mate guarding? Under what conditions might it increase a male's reproductive success?
6. Discuss Helen Fisher's four hormone-driven personality types. Which types are most drawn to each other and why?
7. Why do shifts in brain chemistry make it difficult to keep romantic passion alive in a long term relationship?
8. What may lead a woman to become a single mother by choice? What considerations might she make in choosing a sperm donor?