Cultural Concepts Study Guide, Exam 1

Nature of Anthropology
Know what anthropology is, how it differs from other fields of enquiry, what the “four-field approach” is about, and what the subfields of those four are. Know and understand the definition of anthropology that we discussed in class, including the meanings of its associated words (holistic, biocultural, multi or interdisciplinary, etc.). Understand scientific method (hypothesis versus theory, etc.) and review our discussion of how science attempts to answer questions about the world. What do scientific methods have to do with anthropology and other social sciences?
Key Terms: Theory, Hypothesis, Experiment, Fact, Replicability, Empirical Observation, Ethnology, Ethnography, Primatology, Archaeology, and Applied, Cultural, Linguistic and Biological Anthropology

Genetics and Evolution
What is DNA, where does it reside in the cell, and what are its components (basic structure)? What is DNA’s role in life processes? How do two individuals combine their DNA to make a new individual in sexual reproduction? How is meiosis involved in this? What happens in meiosis? What is the relationship between genotype and phenotype? What are Mendel’s laws? What is meant by the concept of dominance and recessiveness in alleles? Why is mitochondrial DNA significant? What are micro and macroevolution? How do phyletic gradualism and punctuated equilibrium differ in their views of evolution? What are the forces of evolution? How is scientific creationism NOT a true science? Think about the significance of the following people: Lyell, Malthus, Cuvier, Lamarck, Wallace, Linnaeus. Know the contributions of and theories all of these people and what framework they were working under. Who were the biggest influences on Darwin and why?
Key Terms:
AGTC, assortative mating, catastrophism, chromosome, complementary base pair, crossing over, daughter cell, DNA, dominant, drift, fitness, gamete, gene, gene flow, genotype, heterozygous, homologous, homozygous, Inheritance of Acquired Characteristics, meiosis, migration, mitosis, mtDNA, mutation, nucleotide, nucleus, phenotype, principle of independent assortment, principle of segregation, Punnett Square, random mating, recessive, selection, speciation, uniformitarianism, zygote,

Primates
What are the basic characteristics of each of the following primate subgroups: primates in general, anthropoids, prosimians, hominoids, Platyrhines (New World Monkeys), Catarhines (Old World Monkeys and Apes), Hominids. Why do we study primates in an evolutionary context? What can we learn from their study? What was the likely environment that fostered the evolution of primates? What is special about pygmy chimps?
Key terms: Estrus, lumbar curve, stereoscopic vision, prehensility, 7 levels of Linnean taxonomy (KPCOFGS), brachiation, knuckle-walking, vertical leaping, pelvic girdle, prognathism

Human Biological and Cultural Evolution
What differentiates hominids in general from everything that came before? Compare and contrast the ideas and support for the Multi-regional hypothesis, Complete Replacement, and Partial Replacement models. Which came first – bipedalism or a large brain, and how do we know? What indicators might we use to detect bipedalism from a skeleton? What are some of the various dating techniques used by paleoanthropologists (see p. 36)? Be able to differentiate between each of the major groups we’ve been examining (Australopithecus, Paranthropus, Homo habilis, Homo erectus, Archaic Homo sapiens, early modern Homo sapiens) in terms of their:
Physical traits
apelike canine complex, chins, sagittal crests, large/small anterior dentition, large jaws, shape of dental arcade, occipital buns, sagittal ridges, pentagonal heads, cranial capacities, shoveled incisors, vault shape (e.g. foreheads, postorbital constriction, etc.).
Early Cultural traits
tool technologies (Olduwan, Acheulian, Mousterian), compassion, art, fire use and making, weapons, hunting strategies, burial, religion, degree of spread around the globe; bifacial, unifacial, cobble, and blade tools, use of pressure versus percussive flaking
Time and space distribution
Be able to fill in timelines of hominin evolution (see p. 41) and suggest why some lines persisted and others didn’t.

Upper Paleolithic
What are the three main divisions of European prehistory, how long did each last, and how did they differ? What were the traditions of the Paleolithic period and how do they differ from one another in their tool types and culture? What new kinds of artifacts appear in the Upper Paleolithic that were not seen before? What ended the Paleolithic? How was life different in the Mesolithic?
Race and Human Variation
What is biological determinism? What is race, what does race really refer to, and what are the problems associated with determining a meaningful definition of “race”? How is the concept of overlapping normal distributions for continuous traits related to race? How are the polymorphic traits in chapter 6 (sickle cell, blood groups, lactase deficiency, etc.) related to the idea of race as environmentally induced phenomena? What is ethnicity? Compare biological and social race concepts. How have societies dealt with ethnic heterogeneity? What are some of the racist ideas refuted in this chapter (such as the melanin theory?)

Key Terms: Clines, pureblood, hypodescent, polymorphisms, blood groups, heterozygous advantage, sickle cell anemia, cline, lactose intolerance, polygenic traits, Bergmann’s and Allen’s Rule, race, rickets, malaria, melanin production, acclimatization, acclimation, developmental acclimatization, eugenics, ethnicity, ethnogenesis, population, pluralism, assimilation

Possible Essay Questions for Exam 1

Discuss the four main subfields of anthropology and how each differs in its approach or interests in understanding humans. Include how any two of them might each apply scientific method to their research.

Demonstrate an understanding of the similarities and differences between hominoids, hominids, prosimians, and monkeys. Include at least two distinctive traits for each of the four groups above that would be unique to that group.

Demonstrate an understanding of any three of the major forces of evolution by explaining how they differ in method, yet can result in long-term changes to a population (evolution).

Discuss the evidence for and against each of the three models of modern human origins.

Modern anthropologists think of “racial” differences as resulting from environmental differences in geographically separated human populations. Use two detailed examples from your readings or class to illustrate what this means.

At one time, there were three separate genera of hominids extant in Africa about 2 mya. What were they and explain 1) the apparent problem with this situation, and 2) how we can explain the existence of three hominids in an environmental or ecological context.

Compare and contrast punctuated equilibrium and phyletic gradualism. What is the evidence for and against each?

Discuss in detail three differences in the skeletons of bipeds and quadrupeds and why each is indicative of the form of locomotion.

Discuss three hypotheses about the reasons behind the move to hominid bipedalism.

Compare and contrast pluralism and assimilation policy. Which do you think America practices, and why?