ANTH 215  Physical Anthropology  
Study Guide for Exam-III

**General:** The final exam covers all the lectures and reading in Jurmain et al. (Chapters 8-13 & 17) since the last exam. This exam is worth 30% of your final grade for the course.

**Exam format:** Approximately 90 multiple-choice (@ 1 pt), map question (10 pts), and bonus (5 pts).

**Review the following:**

1. Review the relative and absolute dating techniques and examples of each (e.g., stratigraphy, K-Ar, C-14, etc.).

2. Primate evolution: what is the fossil evidence for primate evolution? Review the current fossil specimens available for each of the epochs of the Tertiary, their general morphological features, taxonomy, spatial and temporal distribution. Also, be able to summarize the various adaptive radiations (i.e. first prosimian, anthropoid, hominids etc.), which account for primate evolution from Paleocene to Miocene/Pliocene times.


4. What are the current models to explain the appearance of anatomically modern humans. What is the nature of the evidence (fossil and molecular), dates, implications etc.?  

5. Study all the maps in Jurmain et al. and know the location of ape and human fossil sites.

**Multiple choice:** Some examples have been provided. Questions will be drawn from both lecture and textbook reading. You will be examined on some things from the text not specifically mentioned in lecture and *vice versa*.

**Map question:** Know where important primate/human fossil sites are located on 3 base maps used on the quizzes (matching the place indicated on map with the site name) e.g., Taung, La Chapelle, Tabun, Fayum, Hadar, Olduvai, Trinil, Zhoukoudian etc. There will be about 20 items on the map question. Refer to the maps distributed during quizzes and the maps in your textbook.
**Chapter 9 (Fossil primates).**
Postcranial
Zygomatics

**Paleocene (65-55.8 mya)**
Plesiadiforms (Archaic Primates)
- Family Purgatoriidae
  - *Purgatorius*
- Family Plesiadapidae
  - *Plesiadapis*
- Family Carpolestidae
  - *Carpolestes* 
  - *Altiatlasius*

**Eocene (55.8-33 mya)**
Encephalization
Post Cranial Bar
Bilophodont
Euprimates (True Primates)
  - Superfamily Adapoidea
    - Family Amphipithecids
    - Family Notharctids
    - Family Adapoids
      - *Darwinius*
  - Superfamily Omomoidea

**Oligocene (33-23 mya)**
Island Hopping
Platyrrhine/Catarrhine divergence
True Anthropoids
  - Family Oligopithecids
  - Catopithecus
  - Family Parapithecids
    - Apidium
  - Family Propithecids
    - Aegyptopithecus
    - Saadanius

**Miocene (32-5.3 mya)**
Y-5 Molar
O.W. Monkey/Hominoid Split
Plesiadapiformes
Aping Monkeys
  - Superfamily Proconsuloidea
    - *Proconsul*
    - African Forms
  - Superfamily Pliopithecoida
    - European Forms
    - Lomorupithecus
True Apes
  - Superfamily Hominoidea
    - *Kenyapithecus*
    - Dryopithecus
    - Oranopithecus
    - Sivapithecus
    - Gigantopithecus
    - Lufengpithecus
  - Extinction of Hylobatids
  - Small bodied vs. Large bodied

**Chapter 10**
Mosaic evolution

“Culture”
Material Culture
Principle of Superposition
Tree Ring Dating/dendrochronology
Biological time
Biostratigraphy
stable carbon isotopes
Thermoluminiscence
Taphonomy
Context
Stratigraphy
Half-life
Piltdown
Artifacts
Absolute dating
Louis Leakey
Mary Leakey
Olduvai Gorge
Paleoanthropology
Paleoecology
Paleomagnetism
Paleontology
phytoliths
microliths
microwear
core
flake
direct percussion
pressure flaking
protohominid
Potassium-argon dating
Stratigraphy
Acheulian
C-14
Chronometric
half-life
taphonomy
Environmental Determinism

**Chapter 11**
Bipedalism
Habitual and Obligate Bipedalism
Pre-Australopith Anatomy

PreAustralpiths
  - Sahelanthropus
  - Orrorin
  - Ardipithecus

Aramis

Australopiths (4.2-1.2 mya)
Sectorial Premolar
Australopithecus anamensis
  - Lucy
  - Olduvai
  - Laetoli footprints
Australopithecus aethiopicus
  - Black Skull
Australopithecus aethiopicus
Australopithecus africanus
  - Raymond Dart

- Half-life
- Taphonomy
- Environmental Determinism
Taung Child
*Australopithecus boisei*
“Zinj”
*Australopithecus garhi*
*Australopithecus robustus*
*Australopithecus sediba*
**Early Homo**
*Homo Habilis*

**Chapter 12**
*H. erectus/ ergaster*
Sale
Rabat
Boxgrove
Biface
Acheulian
nuchal torus
WT 15000
supraorbital torus (tori)
Pleistocene
“Pithecanthropus”
“Sinanthropus”
shovel-shaped incisors
Davidson Black
Franz Weidenreich
**African Sites**
Daka
Olduvai
Nirikotome
East Turkana
**Chinese Sites**
Hexian
Lantian
Zhouchoudian
**Javanese Sites**
Sangiran
Trinil
Ngangdong
Eugene Dubois
**European/SE Asian Sites**
Sima del Elfante/Atapuerca
Ceprano
Dmanisi

**Chapter 13 (Neanderthals/ archaic* H. sapiens).**
Anatomically modern human beings
Aurignacian
archaic* Homo sapiens*
Hadar
Piltdown
*Homo habilis/rudolfensis*
Kromdraai
Laetoli
"Lucy"
Makpansgat

**Chapter 14 (Anatomically modern* H.s.*).**
Magdalenean
Solutrean
Multiregional model
Out of Africa or Replacement model
Partial Replacement/Assimilation model
mt-DNA and mitochondrial Eve
Kalises River Mouth
Border Cave
Qafzeh
Alamira
Aurignacian
burin
Katanda
Skhul
Tabun
Upper Paleolithic
Middle Paleolithic
Cro-Magnon
Lascaux
Kow Swamp
Wadjak
Ordos
atlatl
Venuses
Predmosti
Omo Kibish
Herto (*H.s. idaltu*)
Examples of Some multiple Choice Questions:

1. The earliest definite tools were made of:
   a. ivory
   b. wood
   c. metal
   d. fiber
   e. stone

2. The time of the greatest prosimian radiation was during the:
   a. Paleozoic
   b. Cretaceous
   c. Paleocene
   d. Eocene
   e. Pleistocene

3. Which of the following is the least related to the rest?
   a. Gorilla
   b. Pan
   c. Pongo
   d. Homo

4. What is the most important Oligocene fossil primate locality in the Old World?
   a. Gombe Stream Reserve
   b. Fayum
   c. Olduvai Gorge
   d. Indonesia
   e. all of these

5. The Ramapithecines:
   a. were mostly Eurasian in distribution
   b. were probably more adapted to ground foraging than dryopithecines
   c. include forms that were probably closely related to orangs
   d. include Sivapithecus
   e. all of these

6. Olduvai Gorge is:
   a. the site of the first ramapithecine discovery
   b. situated along the East African Rift Valley system
   c. in Northern Tanzania
   d. all of these
   e. b and c only

7. The first australopithecine was found in:
   a. Indonesia
   b. South Africa
   c. East Africa
   d. South America
   e. none of these
8. Raymond Dart called the hominid discovered in 1924:
   a. *Australopithecus africanus*
   b. *Plesianthropus transvalensis*
   c. *Paranthropus robustus*
   d. *Telanthropus capensis*
   e. all of these

9. If the single-species hypothesis applies, all australopithecine should be classified within:
   a. either *Paranthropus* or *Australopithecus*
   b. either *Australopithecus africanus* or *Australopithecus robustus*
   c. *Sivapithecus* only
   d. *Australopithecus africanus* only
   e. *Telanthropus capensis* only

10. *A. boisei* in East Africa is:
    a. a very gracile australopithecine
    b. an early member of the genus *Homo*
    c. not a hominid
    d. a very robust australopithecine
    e. all of these

11. The important fossil find, ER-3733, is thought to be a representative of:
    a. *A. boisei*
    b. *H. erectus*
    c. *H. sapiens*
    d. *A. africanus*
    e. *Zinjanthropus*

12. Mindel, Riss, and Wurm are the names of:
    a. Pleistocene fossils from Europe
    b. archaeological sites from the Near East
    c. paleomagnetic reversal events
    d. Pleistocene glaciers

13. The reason for the term "erectus" in *H. erectus* was the discovery of ____________, which indicated the owner stood erect.
    a. a femur
    b. a pelvis
    c. foot bones
    d. a complete human skeleton

14. The time period in which Neanderthals lived is ____________, years ago.
    a. 1 million - 2 million
    b. 300,000 - 125,000
    c. 125,000 - 35,000
    d. 40,000 - 10,000

15. Anatomically modern human beings appeared about ____________, years ago.
    a. 15,000
    b. 40,000
    c. 100,000
d. 500,000

16. Upper Paleolithic populations were present:
   a. only in Europe
   b. only in Europe and the Near East
   c. only in the Old World
   d. in the Old World and the New World

17. Recent finds in Australia suggest that anatomically moderns entered that continent from Indonesia as early as (select earliest correct date):
   a. 100,000 y.a.
   b. 35,000 y.a.
   c. 18,000 y.a.
   d. 5,000 y.a.

Answers to Multiple Choice Questions
1. e
2. d
3. c
4. b
5. e
6. e
7. b
8. a
9. d
10. d
11. b
12. d
13. a
14. c
15. c
16. d
17. b