The test format is written paragraph/short essay answers. The instructions that will appear on the test are at the end of the guide.

All exam questions will be drawn from the lecture material and class discussion with reference to the required readings.

To prepare for the test make sure that you understand, or even better, that you can provide a written answer to the following issues/statements:

1. Be able to briefly discuss early- vs late-emergence theories about the origins of human language.

2. Using examples, be prepared to discuss one or more behavioral scenarios explaining the hominoid transition from quadrupedalism to bipedalism.

3. Hominid evolution is characterized by rapid brain encephalization during the last 2 million years. Brain evolution occurred even though brain tissue is metabolically expensive. Be prepared to discuss one or more ideas explaining why human brain expansion occurred despite these costs.

4. According to Stiner, early humans went through two major transitions in trophic level, one occurring around 2 million years ago, and then again recently after 20 thousand years ago. Be prepared to briefly discuss how these transitions affected diet and behavior in hominid evolution.

5. Using examples, be prepared to briefly describe the principles of reciprocal altruism governing interactions between individuals in a social group.

6. According to Dawkins, what is the level of selection (genes, individuals or groups) and why? Support your answer with an example.

7. According to Dawkins, why do individuals not engage in behaviors for the benefit of the group? Illustrate with an example.

8. How can an evolutionary stable strategy (ESS) that incorporates altruistic interactions between individuals be favored by selfish genes?

9. What is the coefficient of relatedness \( r \), and how is it thought to affect behavior among kin. Be prepared to use an example that illustrates the concept of inclusive fitness.

10. For kin selection to be an important determinant of behavior, animals must be able to identify kin. Be prepared to briefly discuss the issue of kin recognition using examples.

11. Why sex, given that asexual reproduction seems to be quantitatively more efficient in passing
genes across generations? Be prepared to briefly describe at least two theories about the evolution of sex.

12. Why are some theories explaining the evolution of sex less teleological than others? Be prepared to describe and justify a non-teleological theory about the evolution of sex.

13. Be prepared to briefly discuss the biological bases of sex-differences in parental investment in mammals.

14. Should a mother invest equally in all of her children and why? What factors might affect differential investment in her off-spring?

15. Be prepared to briefly discuss examples of male and female reproductive strategies that are in conflict.

16. Be prepared to briefly explain why male reproductive strategies can leave an average male without offspring, whereas female strategies result in almost all females becoming mothers.
EXAM INSTRUCTIONS
This is a written exam composed of paragraph/short essay questions.

You have a choice among eight (8) questions. Answer six (6) questions only.

Write your name and SS# on the top of each answer page.

Write concise paragraphs of AT LEAST three (3) full sentences.
• DO NOT USE PADDING SENTENCES like “I really liked this article” - just give me the facts as you see them.
• DO NOT USE LISTS OR BULLET POINTS.
• You are expected to use all of, and only, the space provided.
• You can and should use blank paper (or unused sections of the test sheets) to prepare your answers. Cross out any writing on the test sheets that you don’t want marked.
• Write legibly - illegible writing will not be marked.
• Ignoring these instructions will result in the deduction of marks.

You have until the end of the class period to complete the exam - GOOD LUCK!
• Don’t forget to write your name and SS# on the top of each answer page.