WFSC 422/632 ETHOLOGY UIN: X X X -_ _ _ -_ _ _

FINAL EXAM (OPEN BOOK, 2 hours)

DIRECTIONS: **Fill in the last 6 digits of your UIN on ALL pages.** Answer each of 24 questions (@ 3 points) in a scholarly style, using complete sentences to explain the keyword concepts and examples. Unless placed in quotes, Folk Psychology is not considered a scholarly style of communication. The criteria for evaluation of each answer will include: concept, example, scientific source. If there is any indication of plagiarism or cheating, the proctor will collect the exam immediately. Plagiarism includes the verbatim use of another's words without using quotation marks and citing the source.

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1. What are the objectives of this course?

2. What is the meaning of **Ultimate Function** (UF) from an ethologist's perspective? (TIP: give example)

3. What is learned intelligence and why have fish, reptiles, birds and mammals diverged during evolution of this trait (TIP: compare brain anatomy)?

4. What are the similarities and differences between artificial selection and natural selection of heritable instinctive behaviors (give examples)?

5. Compare Folk Psychology and Scientific perspectives on behavioral adaptations to stress?

6. Why has migratory behavior EVOLVED in the past history of a species of your choice?

7. What is the concept of communication in ethology?

8. What is an example of the ultimate function of a FIXED communication signal?

9. In a species of your choice, how would you test an hypothesis about the FUNCTION of intense conflict between strangers?

10. In a species of your choice, WHY would the fitness of “assessor genotypes” have been higher than “non-assessors”?

11. How do hierarchical relations within stable groups differ from contests of strength between groups?

12. How would you apply your understanding of social conflict to managing a social species of your choice?

13. For a species with alloparents, how does the development of parental behavior change with age? (TIP: describe the progression from alloparenting to parenting)

14. In a mammal species of your choice, how do the father and mother care for the young?

15. In a species of your choice, how is internal fertilization accomplished?

16. What is the phylogenetic history of asexual reproduction?

17. Within a taxonomic group of your choice, how have species-specific signals diverged?

18. What would be the costs of elaborate displays in males? (TIP: UF answer in terms like “those that…)

19. For a group-hunting species of your choice, how are individuals coordinated in capturing prey?

20. What are examples of anti-predator behaviors with the following functions: camouflage, redirect attack, fight back?

21. How does a species with a GENERALIST foraging strategy decide what to eat?
(PC TIP: choose a species and be specific about the availability & content of food items)

22. What is the function of behavioral adaptations to store nutrients? (UF TIP: pick a species and explain what is predictable/unpredictable in its environment re. food storage)

23. For a species that builds a structure from body secretions, what is the evidence that the proximate mechanisms are more instinct than learned? (TIP: choose a species such as a spider or colonial insect and refer to the degree of variation in response to stimuli)

24. Why has the shape of termite mounds diverged for two species that live in different habitats? (TIP: be explicit about which is the ancestral vs. derived form of the adaptation)