UNIT 4. COMMUNICATING Quiz 4 read (pp81-87)
1. What is an example of a “coded” in contrast to an “uncoded” signal in animal communication?
2. What is an example of a signal with the function of advertising individual identity?
3. What is an example of signaling sexual availability?
4. What is the meaning of the roaring call of a red deer during the breeding season?
5. Why are low pitched sounds better than high pitched sounds for long-range communication?
6. How does the female silk moth attract a male?
7. What is the function of the yawn display in adult male baboons?
8. How have innate responses of fireflies been exploited in evolution by mimics?
9. Which of the following is NOT true about electric fish?
10. Why is the dance of the honeybee an example of a “coded” signal?
11. What is the difference in meaning between a circular and a figure-eight dance in honeybees?
12. Which of the following is NOT true about communication in white-crowned sparrows?
13. Why is the mating call of the tungara frog an example of a trade-off between advertisement and conspicuousness?
14. What is the function of the high-speed ultrasonic call of the speckled bush cricket?

UNIT 5. ATTACK & DEFENSE Quiz 5 read (pp. 89-95)
1. From a scientific perspective, combat is costly, so why do animals fight?
2. What are the costs of uninhibited fighting between strangers?
3. What are the benefits of uninhibited fights for resources?
4. What is the sequence of escalated fighting tactics in equally matched mountain sheep rams?
5. What is the primary social function of the large nippers of the European stag beetle?
6. In which of the following winter scenarios would you predict a blackbird would escalate fights over food?
7. In which species is conflict between evenly matched opponents likely to be resolved by shoving matches?
8. What are the benefits of coded displays at a distance?
9. How does the female black-winged stilt defend her eggs and young?
10. How do stallions assess each other's strength in combat?
11. What is the function of the wide flap of skin on the frill-neck lizard?
12. How has the tendency to escalate fights diverged in arid populations of funnel web spiders compared to populations in wetter regions with abundant food?
13. What is an example of a weapon derived solely with the function of fighting?
14. Are humans the only species to use inanimate objects as weapons?

UNIT 6. HIERARCHY Quiz 6 read (pp. 97-103)
1. What CAUSES hierarchies in stable groups of familiar individuals and not in large aggregations of strangers?
2. What is the meaning of "alpha" and "omega" in describing a hierarchy?
3. Why is the word "dominant" not strictly correct when used to refer to one individual?
4. In what species was a linear hierarchy first described as a "pecking order"?
5. Comparing the presentation posture of a female and the appeasement gesture of a subordinate baboon, what are the similarities/differences?
6. In which of the following social groups would you expect to see a stable hierarchy?
7. How could the experience in a first encounter influence the development of fighting in individuals?
8. How is it that older individuals tend to be more confident and intimidate younger individuals in a hierarchy?
9. In baboons and macaque monkeys how does a mother's rank influence her daughters' rank?
10. Which of the following scenarios illustrates a triangular rather than a linear hierarchy?
11. Which of the following better illustrates territoriality than dominance?
12. What would you predict about a male house sparrow with a large black throat patch?
13. What evidence is needed to test the hypothesis that dominant males are more likely to mate?
14. What causes subordinate wolves not to breed?
15. If subordinates don't breed, why aren't the genes for subordinate behavior edited out of populations?
### QUESTIONS FROM THE PUBLIC (BLOG to prepare for Final Exam)

<table>
<thead>
<tr>
<th>Pres.</th>
<th>Question</th>
</tr>
</thead>
</table>
| 4.1   | Q4.1 What is the concept of communication in ethology?  
       | Q4.2 Compare communication in humans and other animals (similarities & differences)? |
| 4.2   | Q4.3 What is an example of the *proximate cause* of a FLEXIBLE communication sign?  
       | Q4.4 What is an example of a *developmental change* in a FLEXIBLE communication sign? |
| 4.3   | Q4.5 What is an example of *evolutionary change* in a FIXED communication signal?  
       | Q4.6 What is an example of the *ultimate function* of a FIXED communication signal? |
| 5.1   | Q5.1 In a species of your choice, how would you test an hypothesis about the FUNCTION of intense conflict between strangers?  
       | Q5.2 What is the CAUSE of intense combat that may escalate to injury, in a species of your choice (TIP: refer to stimulus, response & internal state)? |
| 5.2   | Q5.3 For a species of your choice, describe HOW conflict between rivals may de-escalate, reducing injurious combat?  
       | Q5.4 What are three hypotheses about WHY display signals have evolved with a function of reducing injurious conflict between rivals? |
| 5.3   | Q5.5 Explain an example of HOW animals assess asymmetry or symmetry in fighting abilities?  
       | Q5.6 In a species of your choice, WHY would the fitness of “assessor genotypes” have been higher than “non-assessors”? |
| 6.1   | Q6.1 How do hierarchical relations within stable groups differ from contests of strength between groups?  
       | Q6.2 What are 3 alternative hypotheses about the STRUCTURE of social hierarchies within animal groups? |
| 6.2   | Q6.3 What are 3 alternative hypotheses about the FUNCTION of social hierarchies within animal groups?  
       | Q6.4 For a species of your choice, what is the FUNCTION of the social hierarchy within the group? |
| 6.3   | Q6.5 For a species of your choice, what CAUSES the social hierarchy within the group?  
       | Q6.6 How would you apply your understanding of social conflict to managing a social species of your choice? |