PART 1. STUDY GUIDE FOR QUIZES

Unit 1. Living with other animals | quiz 1 | Halliday 1993:8-9, 105-109, 140

1. Who is the editor of our textbook and why is he well known?
2. What is ethology?
3. Who were 2 pioneers in the scientific study of ethology?
4. Who is well-known for studies of imprinting in geese & ducks?
5. Who is well-known for studies of courtship in stickleback fish?
6. Who defined the basic questions in ethology?
7. Which of the following is NOT a basic question in ethology?
8. What were the tools used by early ethologists?
9. What are modern tools that have changed the study of ethology?
10. Why is it important to carefully describe examples of behavior?
11. Which of the following is an example of symbiosis between two species that coevolved together?
12. Which of the following examples illustrates parasitism between two species that coevolved together?
13. How would you decide if the relationship between humans and another species is symbiotic or parasitic?

Unit 2. Adapting to changing worlds | quiz 2 | Halliday 1993:133-139

1. What long-term environmental changes influenced adaptive changes in species?
2. What are some examples of short-term (observable) evolutionary change?
3. Pigeons, peregrines and bats roosting on buildings illustrate what kind of change?
4. Why does feeding by geckos and toads near artificial lights illustrate adaptation?
5. Which of the following illustrates adaptation by learning?
6. Which of the following illustrates adaptation by cultural transmission?
7. Which of the following illustrates adaptation by evolutionary change?
8. Which of the following statements best describes how oystercatchers forage?
9. How does the case of Imo illustrate social learning in macaque monkeys?
10. How do rats learn which foods are safe to eat?
11. Which of the following are examples of evolution by artificial selection?
12. Which of the following was NOT an evolutionary change in sticklebacks?
13. How does coloration in guppies illustrate adaptation by evolution?
14. What type of adaptation is illustrated by a hummingbird nesting on a light-bulb?

Unit 3. Survival Skills & Migration | quiz 3 | Halliday 1993:113-131

1. How is behavior related to stress?
2. Which of the following is an accurate example of heat stress?
3. What is different about heat tolerance of a tropical anole and a desert agama?
4. How do canyon lizards survive in a hostile environment?
5. In endotherms, which of the following is NOT a behavioral adaptation to cold?
6. What is the evidence that metabolism of some mammals changes in winter?
7. Which of the following is NOT true about camel adaptations to scarce water?
8. Which of the following is an example of adaptation to unpredictable rains?
9. Which of the following illustrate short distance migration in the Americas?
10. Which of the following illustrate long distance migration in Europe/Africa?
11. Which of the following is the longest distance migrator in the ocean?
12. Which of the following flies from the arctic to the antarctic each year?
13. What causes the migrations of mountain ungulates?
14. What causes migratory restlessness in birds?
15. What is the function of fat in migratory animals?
16. What environmental clues do birds use for a sense of direction?

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?

UNIT 7. REARING THE YOUNG Quiz 7 read (pp29-39)

1. In general, how does parenting in social vertebrates differ from asocial species?
2. How does care of eggs in reptiles compare with birds?
3. Which parent(s) care(s) for young in most birds compared to most mammals?
4. What is an example of a bird species in which BOTH male and female care for young?
5. What is an example of a bird species in which the MALE takes NO part in caring for young?
6. What is an example of a bird species, in which the FEMALE takes NO part in caring for young?
7. What is an example of a bird species, in which NEITHER male nor female cares for their young after hatching?
8. Which of the following is an example of ALTRICIAL young?
9. Why do Kookaburra helpers forgo reproduction and stay at home to help raise their parents' young?
10. Why do mammary glands make the parental care of mammals distinctively different from other taxonomic groups?
11. Which of the following IS NOT true for reproduction in marsupials such as kangaroos?
12. How do young hunters like peregrines learn effective hunting techniques?
13. Comparing 3 great ape species (chimps, gorillas, orangutans), what are the differences in dispersal of offspring from the mother's group?
14. In black bears, do young learn survival skills only from the mother?
15. How do "allomothers" care for infants that are not their own in an elephant herd?

UNIT 8. MATING & BIRTH Quiz 8 read (pp21-27)

1. What are the benefits of internal fertilization?
2. Why is external fertilization considered a more primitive form of reproduction?
3. How does timing of external sperm release influence male competition?
4. Which of the following is NOT true about reproductive organs?
5. What are the functions of prolonged mating duration?
6. What are the risks of mating?
7. For females, what are the benefits of multiple matings?
8. For males, what are the benefits of multiple matings?
9. Which of the following is an example of alternative mating strategies?
10. How does transfer of eggs complicate mating rituals?
11. Which of the following is an example of a hermaphrodite?
12. Why do females of many species synchronize giving birth at the same time?
13. Which of the following illustrates instinctive choice of a suitable site for egg laying?
14. Which of the following is NOT an example of asexual reproduction?
15. Which of the following is an example of a species that times reproduction to coincide with a seasonal pulse of available food?

UNIT 9. COURTING RITUALS Quiz 9 (pp13-19)

1. Which of the following is NOT a courtship ritual?
2. How does the great argus pheasant attract a female from a distance?
3. What is flehman behavior in ungulates?
4. How do North American red-spotted newt males increase sexual receptivity of females?
5. Why do polygynous birds have more dramatic courting rituals than monogamous?
6. How do male tragopan pheasants attract females?
7. How do bowerbirds attract females?
8. Why do females tend to be the choosy sex in polygynous species?
9. In polygynous species, how does the strategy of males tend to differ from females?
10. What are alternative hypotheses about why females choose more elaborate males?
11. What is an example of how the diet of a male might influence his attractiveness?
12. Which of the following is an example of a courtship gift of food?
13. Which of the following is NOT an example of an acoustic courtship display?
14. In the lyrebird, what is the function of imitating the calls of other species?
15. What is the sequence of behaviors in the courtship of dance-flies?

UNIT 10. HUNTING Quiz 10 read (pp43-55)

1. What are the basic components of a hunt?
2. In what sense is the coevolution of predator and prey like an "arms race"?
3. What are the advantages (benefits) of group hunting for lions?
4. What are the disadvantages (costs) of group hunting in lions?
5. How do orca coordinate actions when hunting larger whales?
6. How do dolphins coordinate actions when hunting schools of fish?
7. What are the tactics used by Harris's hawks when hunting in groups?
8. How do young chimpanzees learn to hunt?
9. Which of the following is NOT an example of mixed species cooperative hunting?
10. Which of the following is an example of a "stealth" hunting tactic?
11. Why does the killing bite of small cats and mustellids differ?
12. Why have scorpions, wasps and some snakes evolved poisonous substances?
13. Why have tigers, mantids and chameleons evolved the ability to blend into the background?
14. Which of the following is NOT an example of a species that uses a lure to capture prey?
15. Why has group hunting evolved in canids (the dog family)?

UNIT 11. FORAGING & STORING Quiz 11 read (pp57-63)

1. Given an unpredictable food supply, what are two divergent behavioral strategies used by animals to get enough nutrients to survive & reproduce?
2. How are the digestive processes of a non-ruminant grazing species (e.g. geese, horses, zebras, rhinos) adapted to their choice of grass as a food?
3. How are the digestive processes of a browsing species (e.g. ruffed grouse, goats, white-tailed deer) adapted to their choice of food from shrubs and shoots?
4. How do ruminant grazers (e.g. cows, wildebeest, bison) overcome grass plant defenses?
5. How do honeybees and hyenas illustrate divergent strategies of coping with leftovers?
6. How do rufous throated hummingbirds defend nectar producing flowers from competitors?
7. What are the costs and benefits of storing calories as body fat?
8. How have squirrels and chipmunks diverged in their strategies for storing food?
9. What is an anatomical trait that allows rodents to carry large amounts of seeds or plants from foraging sites to storage burrows?
10. Why have desert species evolved strategies for storing seeds?
11. Why do strategies of white-oak acorns and gray squirrels illustrate coevolution?
12. What are divergent strategies used by species to reduce the probability of "thieves" finding food stores?
13. How do red foxes find food they have cached to keep it away from "thieves"?
14. What is the evidence that great tits remember where they have stored seeds?
15. How do acorn woodpeckers defend their food stores from "thieves"?

UNIT 12. CREATING A HOME Quiz 12 read (pp 65-77)

1. What is similar about the function of structures built by humans and other animals?
2. What are the costs of building homes from body secretions?
3. Why has building behavior of some insect and spider species converged evolutionarily?
4. Which of the following is NOT an example of a body secretion used for building?
5. What are the natural building materials used by eagles, swallows and hummingbirds?
6. Which of the following is NOT an example of building with materials other than body secretion?
7. Why do beavers sometimes walk on their hind legs?
8. Which of the following examples illustrates the function of protection from enemies?
9. What are the costs of reusing a nest structure over several seasons?
10. How does the nest design of the weaverbird protect it from predators?
11. How does the design of their mounds protect termites from heat?
12. How does burrow-building differ in badgers compared to naked mole rats?
13. Which of the following is NOT a feature found in the design of naked mole rat burrows?
14. How has nest building in African weaver ants and Australian green ants converged evolutionarily?
15. How has nest building diverged in two species of bees?