MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

After reading the paragraph, answer the question(s) that follow.

A researcher is investigating the ability of salmon to migrate thousands of miles in the ocean yet return to the same location where they were hatched to spawn. Data from experiments suggest that more than one type of homing mechanism may be involved in this behavior. When salmon arrive at a river mouth from the open sea, they appear to use olfactory cues to find their home streams, but how do they find their way back to the correct spot along the coastline from the open ocean?

Several experiments are carried out to test the hypothesis that geomagnetic factors (the influence of Earth's magnetic field) play a key role in the ability of salmon to find the proper location along the coast. In one such experiment, salmon hatched in Ketchikan, Alaska, were subjected to the geomagnetic characteristics of a different location on the Alaska Peninsula, Cold Bay. The fish were then released to determine to which of the two locations they would return to spawn.

1) If the salmon return to spawn at Cold Bay, the behavior involved is primarily ________, but if they return to Ketchikan, the behavior is primarily ________.
   A) innate . . . learned  
   B) proximate . . . ultimate  
   C) fixed . . . altruistic  
   D) learned . . . innate

2) What type of behavior would explain the ability of the salmon to return to their home streams?
   A) imprinting  
   B) social learning  
   C) habituation  
   D) associative learning

3) When a nipple is placed in a newborn baby's mouth, the infant will immediately begin to suckle. This is an example of
   A) classical conditioning.  
   B) innate behavior.  
   C) imprinted behavior.  
   D) imitation.

4) The dominant herbivores in savannas are
   A) gophers.  
   B) giraffes.  
   C) insects.  
   D) antelope.

5) Which of the following has the greatest impact on the global water cycle?
   A) connecting aquatic and terrestrial biomes  
   B) human overuse of water resources for large cities  
   C) human destruction of forests  
   D) removing animals from their biome

6) Biodiversity considers
   A) the relationships of individuals to a food chain.  
   B) the genetic diversity within and between populations of a species.  
   C) commensal relationships between species.  
   D) the fate of water in the ecosystem.

7) A regional assemblage of interacting ecosystems is a
   A) biome.  
   B) PVA.  
   C) landscape.  
   D) hot spot.
8) Most biodiversity hot spots are found in ________ regions.
   A) tropical  B) tundra  C) temperate  D) western

9) A community is composed of
   A) living organisms and their nonliving environment.
   B) the factors that constitute an organism’s niche.
   C) potentially interacting populations of different kinds of organisms.
   D) one species of organism living in a specific environment on Earth.

10) Which of the zones shown in this depiction of an aquatic biome is the photic zone?

   A) zone A  B) zone B  C) zone C  D) zone D

11) The tree in your backyard is home to two cardinals, a colony of ants, a wasp’s nest, two squirrels, and millions of bacteria. Together, all of these organisms represent
   A) a community.  B) a species.  C) an ecosystem.  D) a population.

12) The ultimate source of energy flowing into nearly all ecosystems is
   A) sunlight.  B) wind.  C) electricity.  D) radioactivity.

13) Which ocean zone describes the interface between ocean and land?
   A) upwelling  B) intertidal  C) abyssal  D) pelagic

14) Fresh water and seawater mix in a(n)
   A) limnetic zone.  B) benthic zone.  C) littoral zone.  D) estuary.
15) Which level in the hierarchy shown is a community?

A) All environments on earth supporting life
B) Savannah
C) All organisms in the savannah
D) Group of cheetahs

A) level A  B) level B  C) level C  D) level D

16) Which of the following statements regarding behavior is true?
A) Innate behaviors are performed the same way in all members of a genus.
B) A fixed action pattern is under strong genetic control.
C) A learned behavior triggers a fixed action pattern.
D) Fixed action patterns are learned behavior sequences.

17) The modification of behavior based upon specific experiences defines
A) habituation.
B) learning.
C) conditioning.
D) imprinting.

18) A male turkey that imprinted onto a human at hatching is transferred as an older juvenile to a flock of "normal" turkeys. When this turkey reaches sexual maturity, he will probably try to court
A) immature male turkeys.
B) humans.
C) male, female, or immature turkeys indiscriminately.
D) mature female turkeys.

19) After many hours of observation, Jennifer noticed that a squirrel in her backyard seemed to retreat up a certain tree every time it was frightened. At the base of that tree was a wheelbarrow. Jennifer wondered how the squirrel found the same tree each time. Perhaps it simply knew to use the tree with the wheelbarrow. That night, Jennifer moved the wheelbarrow a few feet over and placed it against another tree. The next day, the squirrel retreated up the new tree, with the wheelbarrow resting at its base. This experiment suggests that the squirrel was using
A) habituation.
B) imprinting.
C) social learning.
D) spatial learning.
20) A big difference between social learning and imprinting is that
   A) social learning has a primarily genetic basis.
   B) imprinting can only take place among members of the same species.
   C) imprinting does not involve a reward.
   D) social learning is not limited to a sensitive period.

21) The level of ecologic organization that incorporates abiotic factors is the
   A) species.  B) ecosystem.  C) community.  D) population.

22) In which of the following biomes would you expect to find the highest abundance of large, grazing
   mammals?
   A) temperate forest  B) chaparral
   C) temperate grassland  D) desert

23) The sending of, reception of, and response to signals constitute animal
   A) associative learning.  B) cost–benefit analysis.
   C) problem–solving.  D) communication.

24) During the spring, male sage grouse gather in an open area and strut about, erecting their feathers
   in a fanlike display. They also make booming sounds using their inflated air sacs. The function of
   this dance is to
   A) frighten off smaller birds from the territory.
   B) select the showiest females and mate.
   C) imprint the younger male birds.
   D) attract the attention of females.

25) Which of the following is communicated by courtship displays?
   A) The individuals intend to hurt each other.
   B) The male represents a threat to other males.
   C) The individuals are of different species.
   D) The individuals are of the same species and of the opposite sex.

26) The kind of vegetation in a tropical rain forest is generally determined by the amount of
   A) nitrogen in the soil.  B) light.
   C) minerals in the soil.  D) rainfall.

27) While on a walk through a forest, you notice birds in trees, earthworms in the soil, and fungi on
    plant litter on the forest floor. Based on your observations, you conclude that each of these
    organisms occupies a different
    A) habitat.  B) biosphere.  C) ecosystem.  D) abiome.

28) Which of the following terms broadly describes any kind of interaction between two or more
    animals?
    A) dominance hierarchy  B) competition
    C) foraging behavior  D) social behavior
29) Which of the following situations represents an example of territorial behavior?
   A) Sow bugs become more active and move around randomly if they find themselves in a dry area.
   B) Digger wasps are able to recognize the pattern of landmarks around their nests.
   C) Troops of monkey species use well-defined, widely overlapping ranges. Troops avoid encountering each other and are aggressive if they meet.
   D) Gannets breed in dense colonies. Each gannet defends the area within the beak’s reach of its nest, but gannets feeding at sea are indifferent to each other.

30) The major reason for tropical deforestation is
   A) hurricane destruction of large regions.
   B) natural succession as global warming occurs.
   C) governments clearing forests to build cities.
   D) people clearing forests to open up land for agriculture.

31) Pecking order in chickens is an example of
   A) mating behavior.
   B) agonistic behavior.
   C) dominance hierarchy.
   D) alpha order.

32) All of Earth that is inhabited by life is called the
   A) lithosphere.
   B) hydrosphere.
   C) stratosphere.
   D) biosphere.
Answer Key
Testname: CH 51 AND 52 QUIZ

1) D
2) A
3) B
4) C
5) C
6) B
7) C
8) A
9) C
10) D
11) A
12) A
13) B
14) D
15) C
16) B
17) B
18) B
19) D
20) D
21) B
22) C
23) D
24) D
25) D
26) D
27) A
28) D
29) D
30) D
31) C
32) D