



American Creativity Academy

Middle School

Final Exam Review

Practice Exam

Grade 8

Science

2015

Exam will include the material that was covered in Quarter 3 & 4.

Read questions carefully first followed by the answer if provided and if you are still unable to get it come back to the question later!

Key Concepts - Ecology

Circle the letter of the best answer. (1 point each)

1. Biotic factors in an ecosystem may include
 - a. bacteria, soil, and water
 - b. plants, animals, and bacteria
 - c. temperature, water, and soil
 - d. animals, fungi, and temperature
2. An example of a biotic factor is
 - a. soil
 - b. a rock
 - c. water
 - d. a tree
3. An ecosystem is made up of
 - a. similar biotic factors worldwide
 - b. similar abiotic factors worldwide
 - c. both abiotic and biotic factors
 - d. both biomes and populations
4. In a forest ecosystem deer feed on trees that grow in the soil. The soil is an example of
 - a. an abiotic factor
 - b. a biotic factor
 - c. a pioneer species
 - d. a primary consumer
5. Respiration, photosynthesis, and decay are part of the
 - a. water cycle
 - b. nitrogen cycle
 - c. carbon cycle
 - d. potassium cycle
6. Burning fossil fuels, or combustion, is one part of the
 - a. water cycle
 - b. carbon cycle
 - c. nitrogen cycle
 - d. life cycle
7. What types of organisms appear on the bottom layer of an energy pyramid?
 - a. decomposers
 - b. scavengers
 - c. consumers
 - d. producers
8. An animal that eats only plants is a
 - a. primary consumer
 - b. secondary consumer
 - c. tertiary consumer
 - d. primary producer
9. A snake that eats an insect-eating frog is a
 - a. primary consumer
 - b. secondary consumer
 - c. tertiary consumer
 - d. primary producer
10. A biome that is very cold and dry is the
 - a. tundra
 - b. tropical forest
 - c. grassland
 - d. temperate forest
11. Coniferous trees are abundant in the
 - a. meadow
 - b. taiga
 - c. tundra
 - d. desert

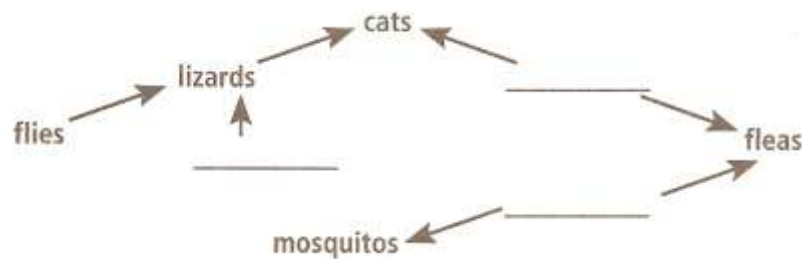
12. Temperate forests have mostly
- cacti
 - grasses
 - coniferous trees
 - deciduous trees
13. Organisms that can produce offspring that also can breed belong to the same
- population
 - species
 - family
 - community
14. A group of organisms of the same species that live in a particular area belong to the same
- population
 - community
 - ecosystem
 - biome
15. Which of the following are in order from simplest to most complex?
- organism, population, ecosystem, community, biome
 - organism, population, community, ecosystem, biome
 - organism, ecosystem, population, community, biome
 - organism, community, population, ecosystem, biome
16. A population of zebras grazing in a herd is one example of a
- pattern in space
 - pattern in time
 - pioneer species
 - symbiotic relationship
17. The 17-year cicadas are a species of insect that appear in their ecosystem only once every 17 years. This is an example of
- a pattern in time
 - a pattern in space
 - an invasive species
 - an abiotic factor
18. Which is an example of a pattern in time?
- grass seeds sprouting after a forest fire
 - geese migrating south for the winter
 - sheep grazing in a herd
 - frogs feeding on flies
19. Mistletoe growing on a tree harms the tree by taking some of its water and nutrients. This is an example of
- mutualism
 - commensalism
 - parasitism
 - cooperation
20. Which of these is an example of competition within a species?
- a vine killing a tree by blocking sunlight
 - male crickets chirping to attract females
 - hyenas and vultures eating the same carcass
 - a pack of lions hunting zebras
21. Bacteria that live on the roots of legumes in exchange for helping plants fix nitrogen are an example of
- mutualism
 - commensalism
 - parasitism
 - competition
22. An example of a nonrenewable resource is
- coal
 - sunlight
 - wind
 - wood
23. An example of a renewable resource is
- petroleum
 - coal
 - lumber
 - copper

Reading Comprehension

Using the passage, answer the following questions. (1 point each)

Before 1955, malaria was a major health problem in Borneo. Nine out of ten people were infected. In 1955 the World Health Organization (WHO) began spraying dieldrin, a pesticide, to kill the mosquitoes that carry malaria. The program was so successful that malaria was almost eliminated from the island. But then other unexpected things began to happen. The dieldrin killed many other insects. The people were happy not to have certain insects, such as flies and cockroaches, in their houses. However, small lizards that lived in the villages began to die after eating dead insects. The cats that fed on these lizards then began to die. Without cats, rats began overrunning the villages. Now people were threatened by a disease called sylvatic plague. Sylvatic plague is carried by fleas that live on rats. WHO sent healthy cats to different parts of the island to take care of the rats. The cats, however, did not end dieldrin's negative effects. In fact, people's roofs began to fall apart. The dieldrin had killed wasps and other insects that fed on a particular type of caterpillar. This caterpillar was not affected by dieldrin. Its population exploded. The caterpillars munched their way through the leaves used in making roofs.

24. Below is a partial food web for the organisms in the paragraph above. Fill in the missing organisms.



25. Assume that a fly and a cockroach are both feeding from the same food source. This is an example of what type of interaction?

26. Malaria is caused by a single-celled organism transferred from mosquito to human. This organism then lives inside the human and causes much harm. What is the name for the relationship between the organism that causes malaria and its human host?

27. Reread the paragraph. What is the cat's prey?

28. Identify the primary consumer from the paragraph. Then list one of its predators.

29. Did the biodiversity of Borneo increase or decrease after spraying?

Short Answer Questions – Ecology

Answer the following in the spaces provided.

30. List the five levels of organization? (Hint – Biosphere is the 6th)

31. What do the arrows in the food web represent?

32. Identify one way in which carbon enters the atmosphere.

33. Identify one way carbon is removed from the atmosphere.

34. Draw a food chain using a sparrow (small bird) as one of the species. /4

Short Answer Questions – Last Lions Video

Answer the following in the spaces provided.

35. What was the Lioness protecting? /1

36. What happened to the cubs? /3

37. List a food chain that takes place in this video? /3

38. Why are lions afraid of deep water? /1

39. What are the three groups of lions (prides)? /3

40. Why does the mother attack the scared(face scared) water buffalo? Why does she attack so furiously and head on? /2

41. What happens at the end of the video between the prides? Why does this happen? /2

42. What is your overall impression of this video? Why? /3
