

Name _____ Date _____ Period _____

EOCT Review Classification and Diversity of Life Questions

Which of the following kingdoms does not contain any heterotrophic organisms?

- a. Protista b. Animalia c. Plantae d. Fungi

How might overuse of antibiotics lead to resistant strains of bacteria?

- a. Antibiotics change the structure of bacteria, making them resistant.
 b. Antibiotics introduce too many bacteria to a population at one time.
 c. Antibiotics provide a breeding ground in which bacteria can flourish
 d. Antibiotics shift natural selection to favor existing resistant bacteria

Barium-131 is a radioactive isotope of the element barium used for gastrointestinal tract scans in doctors offices. Barium-131 has a half-life of 10 days. If a patient drinks 2 grams of barium-131 how much of the isotope will be left after 30 days?

- a. 0.125 g b. 0.25g c. 0.5 g d. 1g

The correct scientific name for the orange-carred sulphur butterfly is

- a. *Phoebis lepidoptera* c. *Phoebis insecta*
 b. Unknown since species name is absent d. *Lepidoptera phoebis*

	
Organism	1
Common Name	Orange-barred sulphur
Class	Insecta
Order	Lepidoptera
Family	Peridae
Genus	<i>Phoebis</i>

Plant cells make their own food by taking in

- a. Oxygen and water c. carbon dioxide and water
 b. Oxygen and hydrogen d. carbon dioxide and water

Most of the ATP made during cellular respiration is produced in

- a. Ribosomes c. mitochondria
 b. Glycolysis d. the Krebs cycle

To what kingdom do mushrooms belong?

- a. Eubacteria b. Protista c. Fungi d. Plantae

Locust trees are tall trees that first grew on Earth during the time of the dinosaurs. They have an adaptation that prevented the dinosaurs from eating them. What is an adaptation helped to save the locust tree?

- A) deep roots C) large thorns
 B) large leaves D) waxy cuticle

Which of the following organisms are prokaryotes?

- a. Protozoa b. Bacteria c. Fungi d. Amoeba

Most organisms that obtain their nutrients from dead or decaying organic matter belong to which of the following kingdoms?

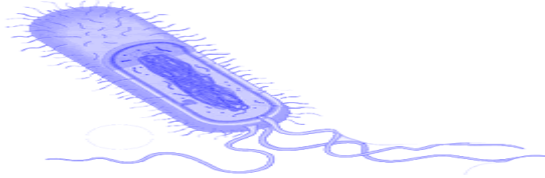
- a. Animalia b. Eubacteria c. Fungi d. Protista

Years	Amount
0	16
7340	8
14680	4
22020	2
29360	1
36700	0.5

11. Thorium-229 is a highly radioactive isotope used in the treatment of certain cancers. Use the chart to determine how much thorium would remain after 7,340 years if a sample began at 20 pounds of pure Th-229

- a. 0.5 pounds c. 5 pounds
 b. 8 pounds d. 10 pounds

12. Science discoveries and technological advances have allowed the population of the Earth to grow exponentially with no end of the growth in sight. Which statement best describes how these advancements are detrimental to the Earth?
- Society is learning new & more Earth friendly means of creating energy.
 - Scientists are learning ways for people and animals to coexist in harmony.
 - Society is learning new ways to replenish resources that we have nearly used up.
 - The growing population is using up Earth's resources which could lead to extinction of many species
13. An organism is multicellular and made up of eukaryotic cells. The organism can move from one place to another. Its cells do not have cell walls or chloroplasts. Into what kingdom should the organism be classified?
- Protista
 - Animalia
 - Fungi
 - Plantae
14. Scientists find a particle only visible with an electron microscope and is the shape of a soccer ball. The particle is non-cellular but has a DNA core. The core is enclosed in a protein coat and the coat has spike-like projections all over its surface. This must be a(n)
- archeobacteria.
 - eubacteria.
 - protist.
 - virus.
15. Scientists use the binomial nomenclature to identify and name organisms. All BUT one statement is true about the binomial system of classification. Which statement is false?
- The family and species name are given.
 - It is a system devised by Carolus Linnaeus.
 - The name of the organism is written in Latin.
 - The system is universally accepted so an organism has the same name to all biologists.



16. The organism shown in the drawing usually reproduces through the _____ process called binary fission.
- asexual
 - heterosexual
 - isosexual
 - sexual
17. How do viruses reproduce?
- They copy their own genetic material inside a protein coat
 - They kill a cell and then, reproduce inside of it.
 - They invade a living cell & use the cell's functions to replicate their genetic material.
 - They do not reproduce because they are not technically living things.
18. In early December, the Right Whale travels from the North Atlantic to Georgia in order to give birth in the warm and relatively calm waters off the coast. Which behavioral adaptation does it show?
- Hibernation
 - Predation
 - Mimicry
 - Migration
19. Which of the following chemical reactions produces the initial food required for all life on Earth?
- $O_2 + H_2O + \text{sunlight} \rightarrow C_6H_{12}O_6 + CO_2$
 - $CO_2 + ATP \rightarrow C_6H_{12}O_6 + O_2$
 - $CO_2 + H_2O + \text{sunlight} \rightarrow C_6H_{12}O_6 + O_2$
 - $O_2 + C_6H_{12}O_6 \rightarrow CO_2 + H_2O$
20. Which of the following is an example of commensalism between two organisms?
- Ants feed on the sugary fluid released by aphids that are feeding on plants, and the aphids are protected by the ants from other insects.
 - A hummingbird feeds on the nectar of a certain species of flowering plant and, while doing so, spreads pollen from one flower to the next.
 - A remora attaches itself to a shark without harming the shark and eats food scraps left by the shark.
 - A fungus infects a potato plant and, over time, kills the plant and then feeds off the dead tissue.

- 21. What is one way that a lysogenic infection differs from a lytic infection?**
- A lysogenic virus does not act on bacteria as a lytic virus does.
 - A lysogenic virus can remain in the host DNA for a longer period of time without becoming active.
 - A lysogenic virus always contains RNA instead of DNA.
 - A lysogenic virus does not affect a cell but does direct the production of new viruses.
- 22. Which of the following adaptations does a cactus have that MOST likely enables it to live in its environment?**
- Salt-tolerant roots
 - Specialized leaves that trap insects
 - Leaves reduced to thick, sharp spines that minimize surface area
 - Air-filled spaces that take in oxygen for its roots
- 23. The harmless king snake has the same coloring as the poisonous coral snake. Which of the following is the MOST likely reason for the success of this adaptation?**
- The food supply is limited.
 - Predators will avoid eating the king snakes.
 - King snakes need to survive the changing season.
 - King snakes must compete for a mate.
- 24. Which of the following is an example of primary succession?**
- The transition from maple forest to pine forest
 - The resprouting of singed trees and bushes after a forest fire
 - The growth of grasses on cooled lava after a volcanic eruption
 - The growth of shrubs and grasses in a newly formed area a glacier melts
- 25. An octopus has the ability to change its coloring depending on its surroundings. Which of the following is the MOST likely reason for this adaptation?**
- They can hunt their prey more easily
 - They must compete for a mate
 - They need to survive the changing season
 - They can travel in groups more easily
- 26. Which of the following describes parasitism?**
- A relationship between two species in which neither species gains from the interaction
 - A relationship between two species in which both species are positively affected
 - A relationship between two species in which one species gains from the interaction and the other is neither positively nor negatively affected
 - A relationship between two species in which one organism benefits while the other is harmed
- 27. The biome characterized by moderate temperatures with lots of precipitation and tall trees with needlelike leaves is a**
- Desert
 - temperate rainforest
 - tropical rainforest
 - grassland
- 28. Some insect species have developed the ability to resist pesticides. Which statement BEST describes this phenomenon?**
- Because their survival depended on it, insects developed variations that made them resistant to poisons
 - Natural selection results in an unfavorable variation for the insects
 - Random variation in the population led to a population with a favorable adaptation
 - Some of the insects became instantly immune when the poisons were introduced into their environment
- 29. Suppose that a short plant occupies a position in a forest close to the ground. The forest is not very dense with trees, but those that exist have created a thick covering of leaves and branches above the plant. Which adaptation would most likely help the plant to survive?**
- shorter trunk
 - wide, flat leaves
 - thick roots
 - thinner branches
- 30. What is the capsid of a virus?**
- The disease it causes
 - The receptors to which it binds
 - It's genetic material
 - Its protein coat