TEST NAME: **Test 1 - Classification**
TEST ID: **2160901**
GRADE: **09 - Ninth Grade - 12 - Twelfth Grade**
SUBJECT: **Life and Physical Sciences**
TEST CATEGORY: **Shared Classroom Assessments**

Student: _____

Class: _____

Date: _____

1. Which ***best*** describes how protists differ from other eukaryotic organisms?

   A. Protists have nuclei, while other eukaryotic organisms do not.

   B. Protists have cell membranes, while other eukaryotic organisms have cell walls.

   C. Protists are classified as nonliving, while other eukaryotic organisms are living.

   D. Protists are mainly unicellular, while other eukaryotic organisms are mainly multicellular.

2. **The periodic table changed in the late 1800s when the noble gases were discovered. A new column was added because this new type of element did not belong in any of the other columns. Is this similar to what happens to the taxonomic system used in biology when a new organism is discovered?**

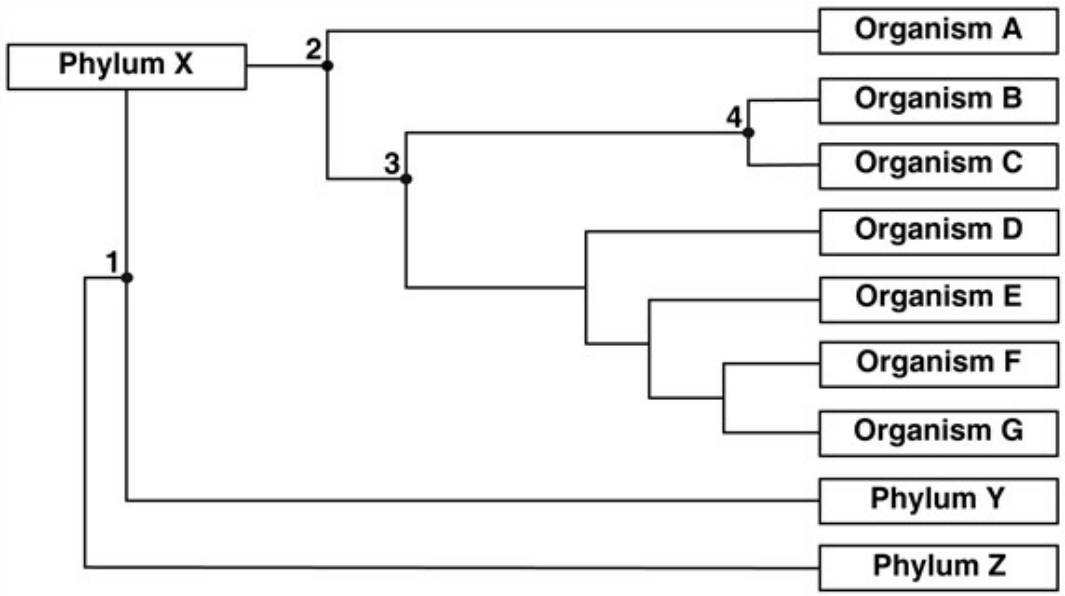
   A. No, all newly discovered organisms are placed in existing taxonomic categories.

   B. No, all newly discovered organisms are placed in a category based on their year of discovery.

   C. Yes, when a newly discovered organism is classified, a new kingdom and phylum must be developed for it.

   D. Yes, when a newly discovered organism does not fit in an existing category, a new category must be developed to classify it.

3. **Look at the phylogenetic tree below.**



Which hypothetical organism is the most recent common ancestor for Organisms A and G?

A. 1
B. 2
C. 3
D. 4

4. **Which factor determines if two individuals are members of the same species?**

A. They live in the same habitat and niche.
B. They forage and eat the same type of food.
C. They mate and produce fertile offspring.
D. They are similar in appearance and color.

5. What can a classification system show about an organism?

A. absolute age of an organism
B. what an organism is made of
C. its relationship to other organisms
D. which organisms are the strongest

6. **Use the information in the table to answer the question that follows.**

Scientific Classification

Kingdom	Animalia
Phylum	Chordata
Class	Reptilia
Order	Testudines
Family	Emydidae
Genus	*Terrapene*
Species	*carolina*

What is the correct scientific name for the organism classified above?

A. *Reptilia testudines*
B. *Chordata reptilia*
C. *Emydidae terrapene*
D. *Terrapene carolina*

7. **Which statement is true?**

A. All fungi are multicellular heterotrophs.
B. All fungi are single-celled heterotrophs.
C. All animals are multicellular heterotrophs.
D. All animals are single-celled heterotrophs.

8. **If two organisms are classified in different orders but are in the same class, which of these statements is true?**

A. The organisms have the same genus.
B. The organisms are in the same phylum.
C. The organisms are in different kingdoms.
D. The organisms are members of the same species.

9. **The table shows some characteristics of four kingdoms.**

Characteristics of Four Kingdoms

Kingdom	Cell Type	Body Type	Cell Wall	Nutrition
Archaebacteria	Prokaryotic	Unicellular	Glycoprotein	Autotrophic and Heterotrophic
Eubacteria	Prokaryotic	Unicellular	Peptidoglycan	Autotrophic and Heterotrophic
Fungi	Eukaryotic	Unicellular and Multicellular	Chitin	Heterotrophic
Plantae	Eukaryotic	Unicellular and Multicellular	Cellulose	Autotrophic

Which characteristic would a taxonomist use to classify organisms as Archaebacteria or as Eubacteria?

A. the internal organization of the cell
B. the number of cells in an individual
C. the chemical composition of the cell wall
D. the nutritional requirements of the organism

10. **The key shown can be used to classify different kinds of plants.**

Plant Classification Key

1. a. Plant has one or more stems ..... go to 2
   b. Plant lacks any stem-like structures ..... Bryophyte

2. a. Plant has spores ..... Pteridophyte
   b. Plant lacks spores ..... go to 3

3. a. Plant has flowers ..... Angiosperm
   b. Plant has cones ..... Gymnosperm

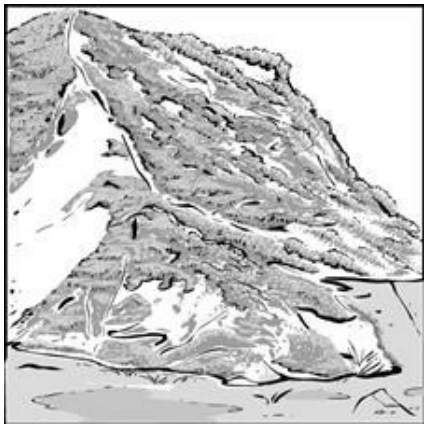
Based on the key above, which of these plants is a gymnosperm?

A.

B.

C.

D.



11. **The table compares a few plant and animal characteristics.**

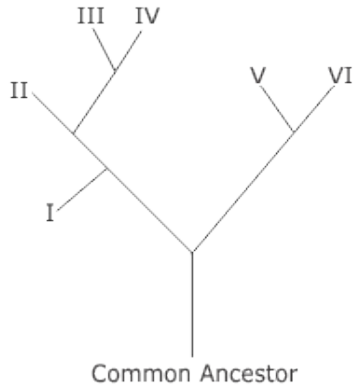
Plant and Animal Characteristics

Characteristic	Plant	Animal
Nutrition	Autotrophic	Heterotrophic
Respiration	Aerobic	Aerobic
Reproduction	Sexual and Asexual	Sexual and Asexual
Circulation	Vascular System	Circulatory System

Which characteristic separates plants from animals?

A. the reaction that uses oxygen to generate an organism's ATP
B. the fusion of gametes that generate a diploid organism
C. the processes used to obtain energy for growth
D. the presence of nuclei in cells

12. This diagram shows a cladogram of six species based on amino acid similarities.



Which two species are the ***most closely*** related?

A. I and II
B. II and IV
C. I and V
D. V and VI

13. Protista are considered probable ancestors of what other kingdoms?

A. plants and fungi

B. animals and plants

C. fungi, plants, and animals

D. bacteria, fungi, and animals

14. **Which characteristic is exclusive to chordates?**

A. digestive tract with two openings

B. dorsal hollow nerve tube

C. closed circulatory system

D. bony internal skeleton

15. **The table shows some characteristics of four kingdoms.**

Characteristics of Four Kingdoms

Kingdom	Cell Wall	Nucleus	Chlorophyll	Reproduction
Archaebacteria	Yes	No	No	Asexual
Eubacteria	Yes	No	Yes and No	Asexual
Protista	Yes and No	Yes	Yes and No	Asexual and Sexual
Fungi	Yes	Yes	No	Asexual and Sexual

What characteristic separates Protista and Fungi from Archaebacteria?

A. protective cell wall

B. identifiable nucleus

C. method of reproduction

D. light-activated chlorophyll

16. **Students were asked to identify the following birds using the classification key shown.**

Bird 1 **Bird 2** **Bird 3**

1. a. Has a short bill (smaller than the head)	go to 2
b. Has long bill (longer than the head)	go to 5
2. a. Has a crest on head	Tufted titmouse
b. No crest on head	go to 3
3. a. Bill is straight	go to 4
b. Bill is not straight	Red-tailed hawk
4. a. Has two black neck bands	Killdeer
b. Has white eye ring	Ovenbird
5. a. Has plumes extending from the head	Great blue heron
b. No plumes extending from the head	Ruby-throated hummingbird

Which statement correctly identifies two of the birds?

A. Bird 1 is a Ruby-throated hummingbird and Bird 2 is a Tufted titmouse.

B. Bird 2 is a Great blue heron and Bird 3 is an Ovenbird.

C. Bird 2 is a Red-tailed hawk and Bird 3 is a Killdeer.

D. Bird 1 is an Ovenbird and Bird 3 is a Tufted titmouse.

17. **A cow and a frog have similar bone structures in their forelimbs. Both have phalanges and radius, ulna, and humerus bones. However, the cow and frog are animals with very different life cycles from each other. Which MOST likely describes why the body structures of these animals are so similar?**

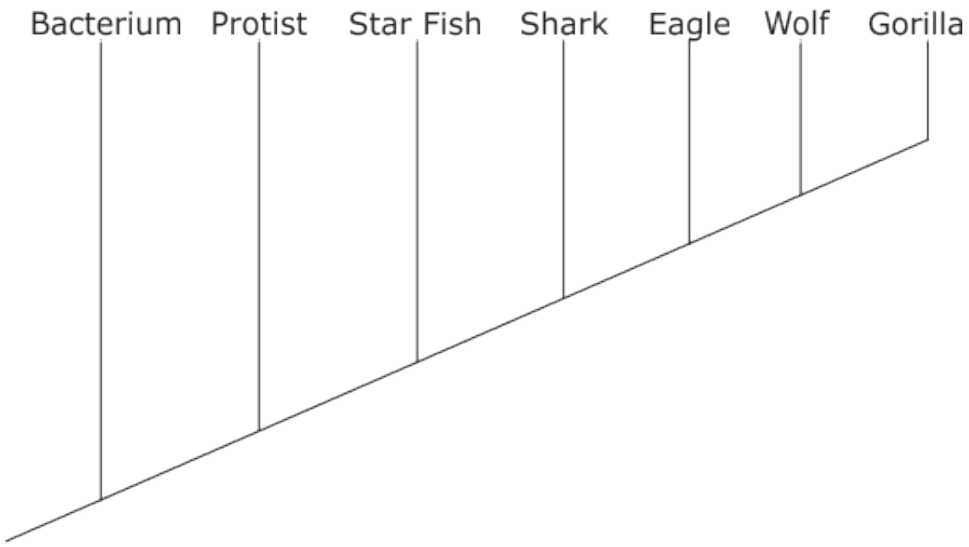
A. Both have undergone similar mutations.

B. Both descended from a common ancestor.

C. Both reacted similarly to environmental pressures.

D. Both spread out from the same geographical region.

18. Examine the phylogenetic tree below.



Which two organisms share the ***most*** proteins in common?

A. wolves and sharks

B. star fish and sharks

C. protists and sharks

D. gorillas and sharks

19. The dichotomous key below is for a certain insect order. An insect with no wings is discovered. The insect has two straight terminal appendages.

1	has wings	go to **2**
	no wings	go to **5**
2	1 pair of wings	go to **3**
	2 pairs of wings	go to **4**
3	2 long filaments extending from abdomen	*Ephemeroptera*
	2 long and 1 short filaments extending from abdomen	*Homoptera*
4	wings near equal size	*Planipennia*
	wings distinctly different in size	*Psocoptera*
5	terminal appendages resemble pincers	*Dermaptera*
	terminal appendages straight	go to **6**
6	2 terminal appendages	*Diplura*
	3 terminal appendages	*Zygentoma*

To which order could this insect belong?

A. *Diplura*

B. *Zygentoma*

C. *Dermaptera*

D. *Ephemeroptera*

20. In recent years, many organisms have been reclassified from historic classifications. What ***most likely*** accounts for these changes?

A. Organisms have evolved and are much more complex today than before.

B. The early taxonomists wanted to keep the system simple and easier to understand.

C. There are many more organisms today than there were for Linnaeus to study.

D. Linnaeus and early taxonomists did not have the biochemical evidence for relationships that we now have.