Name: _____ Class: _____ Date: _____ ID: A

Taxonomy and Kingdoms Common Assessment

Multiple Choice
Identify the choice that best completes the statement or answers the question.

____ 1. Taxonomy is the science of classifying living organisms into groups based on –
a. whether or not traits are shared
b. the ability to metabolize nutrients
c. similarity of common names
d. the presence or absence of cells

____ 2. The classification of four birds is shown below.

	 Eastern Bluebird	 Western Kingbird	 Ovenbird	 Robin
Class	Aves	Aves	Aves	Aves
Order	Passeriformes	Passeriformes	Passeriformes	Passeriformes
Family	Turdidae	Tyranidae	Parulidae	Turdidae
Genus	*Sialia*	*Tyrannus*	*Seiurus*	*Turdus*
Species	*sialis*	*verticalis*	*aurocapillus*	*migratorius*

Based on this classification, which two birds are most closely related?
a. Western Kingbird and Eastern Bluebird
b. Eastern Bluebird and Robin
c. Western Kingbird and Ovenbird
d. Robin and Oven Bird

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___ 3. A classification table is shown below.

CLASSIFICATION TABLE

Group	Contains a Nucleus	Type of Cells	Makes Own Food	Has Cell Walls
1	Yes	Unicellular or multicellular	No	Yes
2	No	Unicellular	Some species	Yes
3	Yes	Multicellular	Yes	Yes
4	Yes	Unicellular or multicellular	Some species	Some species
5	Yes	Multicellular	No	No

Based on the information in the table, which group contains oak trees?

a. Group 5
b. Group 1
c. Group 3
d. Group 2

___ 4. Chordates are animals that have a backbone. Humans, horses, goldfish, sharks, and dogs are examples of the many types of chordates. Which of these chordates are most closely related?

a. Chordates of the same genus
b. Chordates of the same class
c. Chordates of the same order
d. Chordates of the same family

___ 5. The table below provides information about nutrition and cellular structure for organisms in different kingdoms.

Kingdom	Nutrition	Nucleus	Unicellular or Multicellular
Fungi	heterotrophic	yes	unicellular and multicellular
Plantae	autotrophic	yes	multicellular
Animalia	?	?	?

What information best completes the table?

a. autotrophic, yes, multicellular
b. heterotrophic, yes, multicellular
c. autotrophic, no, unicellular
d. heterotrophic, no, unicellular

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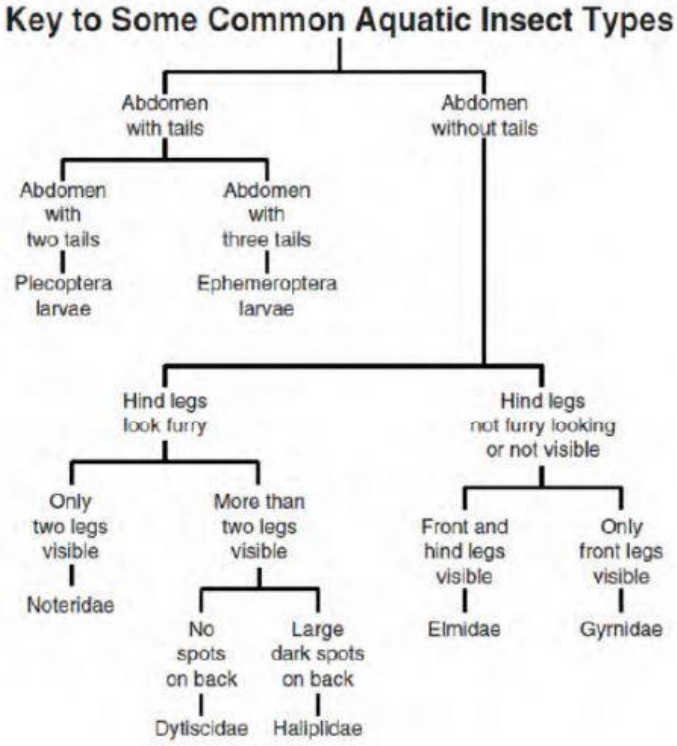
Organism	Observed Characteristics
Q	Eukaryotic, photosynthetic, nonvascular, gametophytes larger than sporophytes
R	Eukaryotic, heterotrophic, nonvascular, reproduces with spores
S	Eukaryotic, photosynthetic, vascular, sporophytes larger than gametophytes
T	Eukaryotic, photosynthetic, vascular, reproduces with seeds

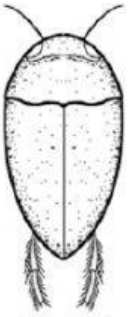
____ 6. According to this information, three of these organisms should be placed in the same kingdom. Which organism should be placed in a different kingdom?

a. Q
b. S
c. R
d. T

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____ 7.





According to this key, to what family does the insect above belong?

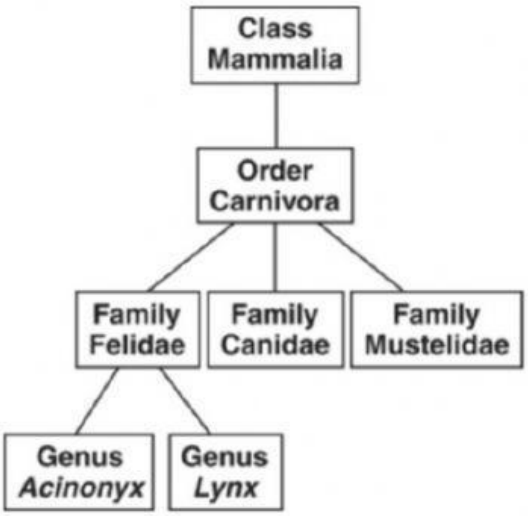
a. Dytiscidae
b. Noteridae
c. Haliplidae
d. Gyrnidae

____ 8. A heterotrophic, immobile organism is found decomposing a dead plant. It is both multicellular and eukaryotic. This organism most likely belongs to which kingdom?

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

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____ 9. The diagram shows the relationship within a classification system.



According to the current classification system, which group shown in the diagram above contains the greatest diversity of animals?

a. Order Carnivora
b. Genus Acinonyx
c. Family Felidae
d. Class Mammilia

____ 10. Brown bears (*Ursus arctos*) are most closely related genetically to which of the following organisms?

a. Spectacled bear (*Tremarctos ornatus*)
b. Koala (*Phascolarctos cinereus*)
c. Polar bear (*Ursus maritimus*)
d. Giant panda (*Ailuropoda melanoleuca*)

____ 11. Some zooplankton belong to the kingdom Protista. Members of this kingdom are characterized as —

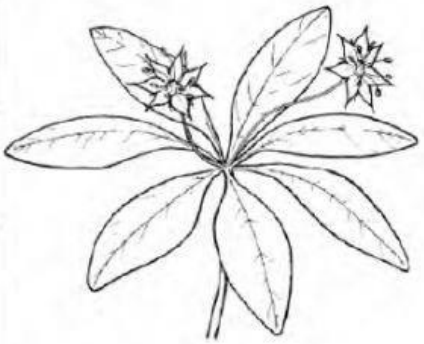
a. containing one or more eukaryotic cells
b. having a four-chambered heart
c. laying eggs with a leathery protective shell
d. having segmented bodies with jointed appendages

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____ 12.

Key to White Wildflowers

1a. Five petals	Go to 2
1b. Seven petals	Starflower (*Trientalis borealis*)
2a. Petals single pieces	Go to 3
2b. Petals deeply divided	Chickweed (*Stellaria media*)
3a. Wide round petals	Common strawberry (*Fragaria virginiana*)
3b. Narrow elongated petals	Bowman's root (*Gillenia trifoliata*)



This dichotomous key can be used to distinguish white wildflowers found in Virginia. According to this key, what type of flower is shown?

a. *Gillenia trifoliata*
b. *Trientalis borealis*
c. *Fragaria virginiana*
d. *Stellaria media*

____ 13. Which of the following taxonomic levels would contain organisms which are the most closely related to each other genetically?

a. Genus
b. Kingdom
c. Species
d. Family

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____ 14.

1a – Vertebrate	**Phylum Chordata**
1b – Invertebrate	Go to 2
2a – Segmented body	Go to 3
2b – Lacks segmentation	Go to 4
3a – Has exoskeleton and jointed legs	**Phylum Arthropoda**
3b – Soft, tube-like body; unjointed appendages if present	**Phylum Annelida**
4a – Soft body; may have tentacles or a hard shell	**Phylum Mollusca**
4b – Radial symmetry; calcitic skeleton and spiny skin	**Phylum Echinodermata**



According to the dichotomous key, the organism shown above would be placed into which of the following phyla?

a. Phylum Chordata
b. Phylum Arthropoda
c. Phylum Echinodermata
d. Phylum Annelida

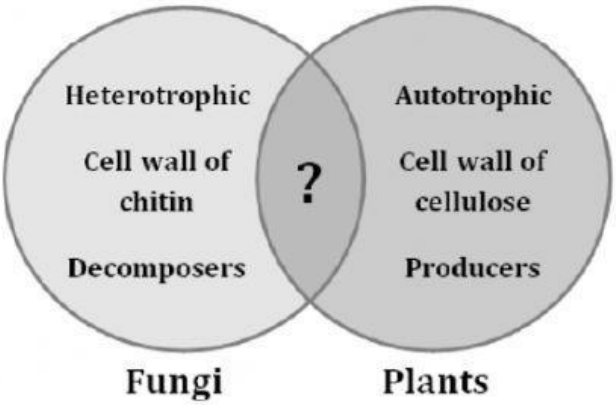
____ 15. The answer to which of the following questions would be most useful in determining whether to classify an organism in kingdom Plantae or kingdom Animalia?

a. Is the organism unicellular or multicellular?
b. Is the organism able to make its own food?
c. Is the organism made of cells with or without nuclei?
d. Is the organism able to respond to stimuli?

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____ 16. A student observes that a type of eubacteria contains chlorophyll. Which of these does this type of bacteria have in common with plants?
a. It is heterotrophic.
b. It contains vascular tissues.
c. It contains mitochondria.
d. It is photosynthetic.

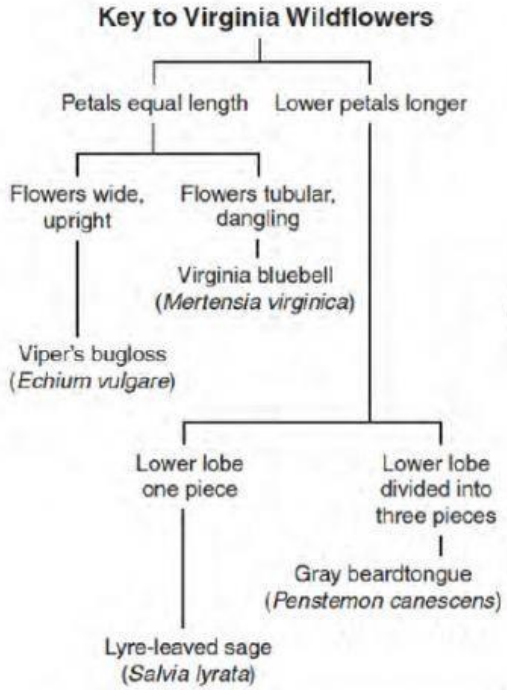
____ 17. Having a standard taxonomic system benefits the scientific community by allowing scientists from all over the world to do which of the following?
a. Understand how other scientists classify predator–prey relationships
b. Have a common understanding in the classification of organisms
c. Have a common system for the classification of locations containing fossils
d. Use a similar system to classify the impact of removing species from ecosystems



____ 18. Which of the following traits is a characteristic shared by fungi and plants that could be used to complete the Venn diagram shown above?
a. prokaryotic
b. single-celled
c. immobile
d. vertebrate

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____ 19.





This key can be used to identify the species of some wildflowers found in Virginia. All of the plants have blue or purple flowers with five petals that are fused together. According to this key, to what species does the plant shown belong?

a. Gray beardtongue (*Penstemon canescens*)
b. Viper's bugloss (*Echium vulgare*)
c. Lyre-leaved sage (*Salvia lyrata*)
d. Virginia bluebell (*Mertensia virginica*)

____ 20. A student designed the chart below to classify different organisms into four groups.

CLASSIFICATION CHART

I.	Wings .....Go to II No wings.....Group A
II.	Feathers .....Group B No feathers .....Go to III
III.	Two legs.....Group C Six legs.....Group D

According to the student's classification chart, an organism with no wings and four legs would belong to which group?

a. Group B
b. Group D
c. Group A
d. Group C

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