

Name \_\_\_\_\_

Period \_\_\_\_\_

AP Biology

Date \_\_\_\_\_

## REVIEW UNIT 7: BIODIVERSITY — SAMPLE QUESTIONS

### A. Sample Multiple Choice Questions

Complete the multiple choice questions to review this unit.

1. A microscopic, unicellular organism that has a cell wall impregnated with silicon and is important as plankton in a food chain belongs to which of the following groups? (90:06)
  - A. mosses
  - B. diatoms
  - C. cyanobacteria (blue-green algae)
  - D. ferns
  - E. brown algae
2. A plant that has a stem with scattered vascular bundles, leaves with parallel venation, and seeds with a single cotyledon is probably a (90:20)
  - A. pine
  - B. moss
  - C. corn plant
  - D. bean plant
  - E. liverwort
3. All members of which of the following groups have the greatest number of characteristics in common? (90:29)
  - A. Class
  - B. Order
  - C. Family
  - D. Genus
  - E. Phylum
4. An organism that is eukaryotic, multicellular, heterotrophic, and lacks cell walls belongs to which of the following? (90:30)

A. Eubacteria	C. Plantae
B. Protista	D. Animalia
C. Fungi	

5. Mosses are characterized by which of the following? (90:59)
- A. A dominant gametophyte with dependent sporophyte
  - B. A dominant gametophyte with independent sporophyte
  - C. A dominant sporophyte with independent gametophyte
  - D. A dominant sporophyte with large dependent gametophyte
  - E. A dominant sporophyte with gametophyte reduced to a few cells
6. Vascular plants with spores borne in sporangia on the underside of leaves are characteristic of which of the following plant groups? (94:05)
- A. Bryophyta (mosses)
  - B. Chrysophyta (golden algae)
  - C. Anthrophyta (flowering plants)
  - D. Pteridophyta (ferns)
  - E. Coniferophyta (conifers)
7. If an invertebrate possesses nephridia as an excretory system, skin as a gas exchange system, and a closed circulatory system, the animal is most likely to be (94:06)
- A. a snail
  - B. a planarian
  - C. an earthworm
  - D. a grasshopper
  - E. a jellyfish
8. Members of the kingdom Fungi generally differ from members of the kingdom Plantae in that fungi (94:15)
- A. have cell walls
  - B. are multicellular
  - C. are heterotrophic
  - D. are both aquatic and terrestrial
  - E. are eukaryotic

**Questions 9 & 10** refer to the data below concerning a newly discovered organism.

Usual mode of reproduction:	Sexual
Type of fertilization:	External
Embryology:	Blastopore contributes to the formation of anus; cleavage is radial
Symmetry:	Immature form is bilateral; mature form is five-part radial
Body cavity:	Lined with tissue derived from mesoderm
Segmentation:	not evident
Skeleton	spiny exoskeleton secreted by the dermis and covered with a thin epidermis
Habitat:	marine

9. Which of the following pairs of terms best describes this organism? (94:113)

- A. Coelomate .. deuterostome
- B. Acoelomate .. metazoan
- C. Diploblastic .. parazoon
- D. Pseudocoelomate .. segmented
- E. Protostome .. unsegmented

10. Into what phylum should this organism be placed? (94:114)

- A. Chordata
- B. Nematoda
- C. Echinodermata
- D. Mollusca
- E. Annelida

**Questions 11–15.** The following questions refer to the list below. (99:87.91)

- A. Annelida
- B. Mollusca
- C. Arthropoda
- D. Echinodermata
- E. Chordata

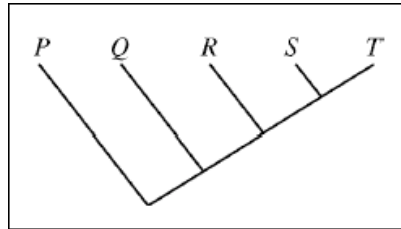
11. Bilaterally symmetrical; deuterostome; dorsal hollow nerve cord (99:87)

12. Coelomate; exoskeleton; jointed appendages (99:88)

13. Pharyngeal slits; endoskeleton derived from mesoderm; ventral heart (99:89)

14. Internal calcareous skeleton, deuterostome; water-vascular system (99:90)

15. Closed circulatory system; protostome; many body segments (99:91)



16. Which of the following conclusions is best supported by the cladogram above?

- A. Species Q and R make up a monophyletic group.
- B. Species P and Q are equally related to species T.
- C. Species P and T do not share a common ancestor.
- D. Species S evolved from species R.
- E. Species S is more closely related to species T than to species R.

The table shows selected characters used to determine relationships among four species of mammals.

Character	SPECIES			
	<i>Spermocyon</i>	<i>Castoropsis</i>	<i>Pseudofelis</i>	<i>Neomysticena</i>
3 toes on hindfeet	X	X		X
Naked tail (hairless)	X	X	X	X
Incisors greatly enlarged		X		X
Hair tufts protrude from ears				X

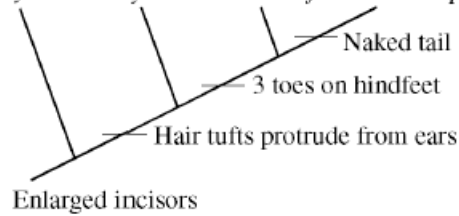
17. Which of the following characters is unique to *Neomysticena*?

- A. Naked (hairless) tail
- B. Three toes on hindfeet
- C. Enlarged incisors
- D. Hair tufts protruding from ears
- E. Body hair

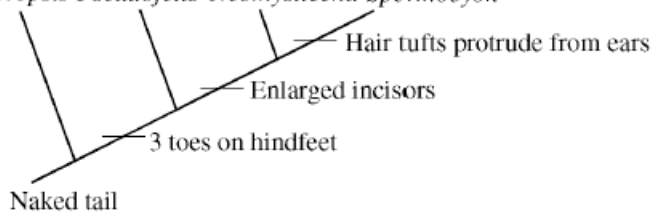
18.

89. Which of the following cladograms correctly represents the relationships among these species?

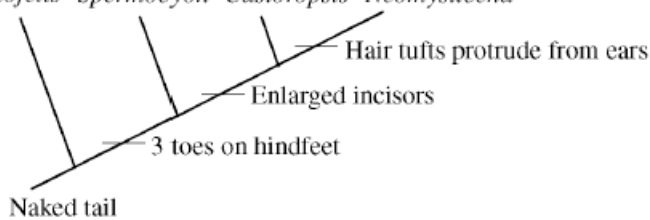
(A) *Spermocyon* *Neomysticena* *Pseudofelis* *Castoropsis*



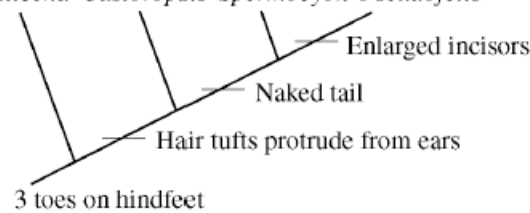
(B) *Castoropsis* *Pseudofelis* *Neomysticena* *Spermocyon*



(C) *Pseudofelis* *Spermocyon* *Castoropsis* *Neomysticena*



(D) *Neomysticena* *Castoropsis* *Spermocyon* *Pseudofelis*



(E) *Pseudofelis* *Spermocyon* *Castoropsis* *Neomysticena*

