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52

87%

**COLUMBUS STATE COMMUNITY COLLEGE**  
ESSH 1101 - Introduction to Environmental Science, Safety & Health

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Quiz 2 - Units 3 & 4 (60 points)

1. Only about 0.024% of the earth's vast water supply is available to humans and other species as liquid freshwater. (1 point)

a. True  
 b. False

pg 47 2.5% fresh water but 3/4 is ice but pg 57 says 0.024%

2. Detritivores, such as earthworms, consume wastes and dead organisms to obtain nutrients. (1 point)

a. True  
 b. False

pg 49 detritivore definition

3. Coral bleaching occurs \_\_\_\_\_. (2 points)

a. when excessive runoff allows household bleach to enter coral reefs  
 b. when reefs become pale because algae leave and polyps die  
 c. when the water becomes too alkaline and polyps overgrow  
 d. when the calcium carbonate skeleton of a reef becomes overgrown

pg 156

4. Lightning is one of the natural mechanisms by which atmospheric nitrogen is converted to ammonia or ammonium ions. (1 point)

-1  
 a. True  
 b. False

ammonification  
pg 60 nitrate ions

$NH_4^+$  &  $NH_3$

nitrate  $NO_3^-$   
 $N_2 \rightarrow NH_3 \rightarrow NH_4^+ \rightarrow NO_3^-$

5. In an ecological community food chain, first trophic level organisms, which use energy from the sun and carbon dioxide from the air to perform photosynthesis, are known as what? (2 points)

-2  
 a. Heterotrophs  
 b. Autotrophs  
 c. Chemotrophs  
 d. Trophic plants

6. Reestablishment of an ecosystem following a disturbance, where remnants of the previous biological community contribute to new growth is referred to as \_\_\_\_\_. (2 points)

a. Primary Succession  
 b. Post-traumatic Succession  
 c. Secondary Succession  
 d. Seasonal Succession

11. The evaporation, precipitation and transpiration of water to and from land to oceans, along with runoff and infiltration to and from land and oceans, is referred to as the \_\_\_\_\_ cycle. (2 points)

- a. Tectonic
- b. Geologic
- c. Hydrologic
- d. Rock

12. When referring to chemical cycles, the naturally produced gaseous phase of Carbon exists in the atmosphere as what type of molecule(s)? (2 points)

- 2
- a. Carbon Tetrachloride
  - b. Carbon Dioxide
  - c. Methane
  - d. Both b and c

*Carbon cycle presentation  
CO<sub>2</sub> & CH<sub>4</sub>*

13. The path a chemical takes through the Atmosphere, Hydrosphere, Lithosphere and Biosphere is referred to as the \_\_\_\_\_. (2 points)

- 2
- a. Life cycle
  - b. Biogeochemical cycle
  - c. Global cycle
  - d. Tectonic cycle

*Nutrient cycle (pg 56) or biogeochemical cycle*

14. Provide and explain one example of an environmental impact resulting from high levels of Nitrogen and/or Phosphorous entering surface water through runoff from agricultural settings. (4 points)

*Surface water pollution via cultural eutrophication causes excess seaweed growth and algae blooms during high heat months. This robs the water of needed oxygen to sustain aquatic life.*

15. Intensive farming practices often result in: (2 points)

- a. an increase in species diversity.
- b. a decrease in species diversity.
- c. no change in species diversity
- d. an increase in productivity.

16. There was a volcanic eruption which coated the nearby landscape with ash. Over time the ash weathered into soil, and small plants started to grow. Within several years, shrubs began to develop. In a few decades, trees began to grow. The development of vegetation is an example of: (2 points)

- a. ecological succession
- b. limiting factor
- c. facilitation
- d. reforestation

26. Explain how commensalism differs from mutualism. (2 points)

- ① Commensalism is where there is an interaction that benefits one species but has little beneficial or harmful effect on the other.
- ② Mutualism is where two species interact and both benefit in some way either ~~through~~ by providing food, shelter, protection, or some other resource.

27. On the evening news, there is a forecast of sunny weather for the next day with a high temperature 10°F warmer than today. This is an example of climate. (1 point)

- a. True  
b.  False

28. Some animals living in tropical rainforests have stratified niches that are \_\_\_\_ to \_\_\_\_ competition for resources. (2 points)

- a. specialized; increase  
b.  specialized; minimize  
c. generalized; increase  
d. generalized; minimize

29. Extinction can occur as the result of habitat fragmentation. (1 point)

- a.  True  
b. False

30. An endangered species is best described as any species that \_\_\_\_\_. (2 points)

- a. has fewer than two individuals remaining  
b. is in danger of becoming rare  
c.  could soon become extinct  
d. may eventually become threatened

31. HIPPCO is \_\_\_\_\_. (2 points)

- a. an acronym that summarizes the Endangered Species Act goals  
b.  an acronym to summarize the direct causes of extinction resulting from human activities  
c. the name of an ecotourism company in Africa that specializes in hippopotamus sightings  
d. an acronym to summarize the health care right to privacy act