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| <p>1. Where is most freshwater located on Earth?</p> <p>A polar ice caps
B groundwater
C lakes
D rivers</p> <p>2. Which describes the hydrosphere?</p> <p>A Most of it contains salt.
B It is made of only freshwater.
C All of it is located above ground.
D It is formed by a climate change.</p> <p>3. Which condition in the ocean is most responsible for an increase in the fish population near the surface?</p> <p>A buoyancy
B density
C salinity
D upwelling</p> | <p>4. Which pair of organisms represents a connection between aquatic and terrestrial food webs?</p> <p>A whales and plankton
B seagulls and oysters
C spiders and mosquitoes
D humans and coral</p> <p>5. Which tool is used to determine precipitation amounts?</p> <p>A balance scale
B hygrometer
C rain gauge
D thermometer</p> <p>6. Which is evidence that elements can combine to form new compounds?</p> <p>A melting a solid
B freezing a liquid
C moving a piece of metal with a magnet
D pouring two liquids together to create a solid</p> |
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7. Which property of metals allows them to be used to make coins that have the same thickness?
- A electrical conductivity
B density
C malleability
D specific heat
8. Which **best** describes why metals are used for making pots and pans that are used for cooking?
- A Metals have low specific heats and high melting points.
B Metals have high specific heats and low melting points.
C Metals have low specific heats and low melting points.
D Metals have high specific heats and high melting points.
9. Which **best** describes the physical change of an aluminum soda can after it is crushed?
- A There is a change in the mass of the can.
B There is a change in the weight of the can.
C There is a change in the volume of the can.
D There is a change in the specific heat of the can.
10. A chemical reaction produces two new substances, and each product has a mass of 25 grams. What was the total mass of the reactants?
- A 25 grams
B 50 grams
C 75 grams
D 100 grams
11. Which factor **best** explains why some people will react differently than others to the same dose of an antibiotic?
- A high potency
B low concentration
C individual exposure
D individual susceptibility

12. If a farmer decides to have a pesticide-free farm, which is **most likely** the result of this choice?
- A The farmer's crops will yield more than if pesticides had been applied.
- B The farmer's crops will yield the same amount whether or not pesticides have been applied.
- C Insects may eat a larger percentage of the farmer's crops, causing a lower harvest than if pesticides had been applied.
- D Insects may eat a lower percentage of the farmer's crops, causing a higher harvest than if pesticides had been applied.
13. Which is the **best** evidence that two continents were once connected?
- A They have similar types of rocks and fossils.
- B They are in the same stage of succession.
- C They exist along the same line of latitude.
- D They have the same climate.
14. What does a scientist **most likely** consider when studying the relative ages of rock layers in a canyon wall?
- A chemical weathering
- B current climate
- C amount of daily rainfall
- D Law of Superposition
15. Which can **most likely** be concluded about the top layer of rock seen in an undisturbed cliff wall?
- A The top layer is older than layers located farther down the cliff.
- B The top layer is younger than layers located farther down the cliff.
- C The top layer contains more fossils than layers located farther down the cliff.
- D The top layer contains fewer fossils than layers located farther down the cliff.

16. Based on the Law of Superposition, what can be concluded about fossils?
- A Fossils give clues about past climate patterns.
 - B Fossils form from the hard parts of organisms.
 - C The oldest fossils are found in the lowest rock layers.
 - D The most recent fossils were advanced organisms.
17. Which **best** explains why fossils of the same species of a reptile were discovered in South America and in western Africa?
- A The reptiles evolved in both South America and Africa.
 - B The continents of South America and Africa were once joined.
 - C Land bridges connected the continents of South America and Africa.
 - D The reptiles could swim the distance between South America and Africa.
18. Which process **best** explains how mountain ranges are worn down over time?
- A asteroid impacts
 - B volcanic eruptions
 - C mechanical and chemical weathering
 - D continental drift and seafloor spreading
19. Which organelle stores genetic information?
- A flagellum
 - B nucleus
 - C mitochondrion
 - D vacuole
20. What is the energy source that an animal cell needs to carry out life processes?
- A water stored in vacuoles
 - B proteins built in ribosomes
 - C light absorbed by chloroplasts
 - D sugar broken down in mitochondria

21. Which statement **best** describes influenza?
- A Influenza causes most forms of lung cancer.
 - B Influenza is caused by poor hygiene.
 - C Influenza is cured with antibiotics.
 - D Influenza is highly contagious.
22. Which type of training should local schools offer in order to prepare potential workers in the pharmaceutical industry?
- A biotechnology
 - B ecology
 - C engineering
 - D geology

End of Sample Items

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Answers to EOG Grade 8 Science Sample Items

1. Objective 3.02

Explain the structure of the hydrosphere including: Water distribution on earth.; Local river basin.; Local water availability.

Thinking Skill: Knowledge **Correct Answer:** A

2. Objective 3.02

Explain the structure of the hydrosphere including: Water distribution on earth.; Local river basin.; Local water availability.

Thinking Skill: Knowledge **Correct Answer:** A

3. Objective 3.03

Evaluate evidence that Earth's oceans are a reservoir of nutrients, minerals, dissolved gases, and life forms: Estuaries.; Marine ecosystems.; Upwelling.; Behavior of gases in the marine environment.; Value and sustainability of marine resources.; Deep ocean technology and understandings gained.

Thinking Skill: Applying **Correct Answer:** D

4. Objective 3.04

Describe how terrestrial and aquatic food webs are interconnected.

Thinking Skill: Organizing **Correct Answer:** B

5. Objective 3.06

Evaluate technologies and information systems used to monitor the hydrosphere.

Thinking Skill: Knowledge **Correct Answer:** C

6. Objective 4.02

Evaluate evidence that elements combine in a multitude of ways to produce compounds that account for all living and nonliving substances.

Thinking Skill: Analyzing **Correct Answer:** D

7. Objective 4.04

Describe the suitability of materials for use in technological design: Electrical Conductivity.; Density.; Magnetism.; Solubility.; Malleability.

Thinking Skill: Evaluating **Correct Answer:** C

8. Objective 4.05

Identify substances based on characteristic physical properties: Density.; Boiling/Melting points.; Solubility.; Chemical reactivity.; Specific heat.

Thinking Skill: Analyzing **Correct Answer:** A

Answers to EOG Grade 8 Science Sample Items

9. Objective 4.06

Describe and measure quantities related to chemical/physical changes within a system: Temperature.; Volume.; Mass.; Precipitate.; Gas production.

Thinking Skill: Analyzing **Correct Answer:** C

10. Objective 4.07

Identify evidence supporting the law of conservation of matter.: During an ordinary chemical reaction matter cannot be created or destroyed.; In a chemical reaction, the total mass of the reactants equals the total mass of the products.

Thinking Skill: Analyzing **Correct Answer:** B

11. Objective 4.09

Describe factors that determine the effects a chemical has on a living organism including: Exposure.; Potency.; Dose and the resultant concentration of chemical in the organism.; Individual susceptibility.; Possible means to eliminate or reduce effects.

Thinking Skill: Integrating **Correct Answer:** D

12. Objective 4.10

Describe risks and benefits of chemicals including: Medicines.; Food preservatives.; Crop yield.; Sanitation.

Thinking Skill: Generating **Correct Answer:** C

13. Objective 5.01

Interpret ways in which rocks, fossils, and ice cores record Earth's geologic history and the evolution of life including: Geologic Time Scale.; Index Fossils.; Law of Superposition.; Unconformity.; Evidence for climate change.; Extinction of species.; Catastrophic events.

Thinking Skill: Applying **Correct Answer:** A

14. Objective 5.01

Interpret ways in which rocks, fossils, and ice cores record Earth's geologic history and the evolution of life including: Geologic Time Scale.; Index Fossils.; Law of Superposition.; Unconformity.; Evidence for climate change.; Extinction of species.; Catastrophic events.

Thinking Skill: Applying **Correct Answer:** D

Answers to EOG Grade 8 Science Sample Items

15. Objective 5.01

Interpret ways in which rocks, fossils, and ice cores record Earth's geologic history and the evolution of life including: Geologic Time Scale.; Index Fossils.; Law of Superposition.; Unconformity.; Evidence for climate change.; Extinction of species.; Catastrophic events.

Thinking Skill: Evaluating

Correct Answer: B

16. Objective 5.01

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Thinking Skill: Analyzing

Correct Answer: C

17. Objective 5.03

Examine evidence that the geologic evolution has had significant global impact including: Distribution of living things.; Major geological events.; Mechanical and chemical weathering.

Thinking Skill: Applying

Correct Answer: B

18. Objective 5.03

Examine evidence that the geologic evolution has had significant global impact including: Distribution of living things.; Major geological events.; Mechanical and chemical weathering.

Thinking Skill: Knowledge

Correct Answer: C

19. Objective 6.02

Analyze structures, functions, and processes within animal cells for: Capture and release of energy.; Feedback information.; Dispose of wastes.; Reproduction.; Movement.; Specialized needs.

Thinking Skill: Knowledge

Correct Answer: B

20. Objective 6.04

Conclude that animal cells carry on complex chemical processes to balance the needs of the organism.: Cells grow and divide to produce more cells.; Cells take in nutrients to make the energy for the work cells do.; Cells take in materials that a cell or an organism needs.

Thinking Skill: Integrating

Correct Answer: D

21. Objective 7.02

Describe diseases caused by microscopic biological hazards including: Viruses.; Bacteria.; Parasites.; Contagions.; Mutagens.

Thinking Skill: Analyzing

Correct Answer: D

Answers to EOG Grade 8 Science Sample Items

22. Objective 7.05

Investigate aspects of biotechnology including: Specific genetic information available; Careers; Economic benefits to North Carolina; Ethical issues; Impact for agriculture.

Thinking Skill: Analyzing

Correct Answer: A