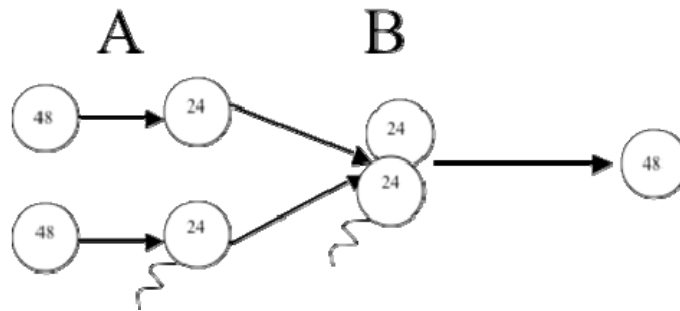


## Practice Science Proficiency Test Spring 2009

### Multiple Choice

Identify the letter of the choice that best completes the statement or answers the question.

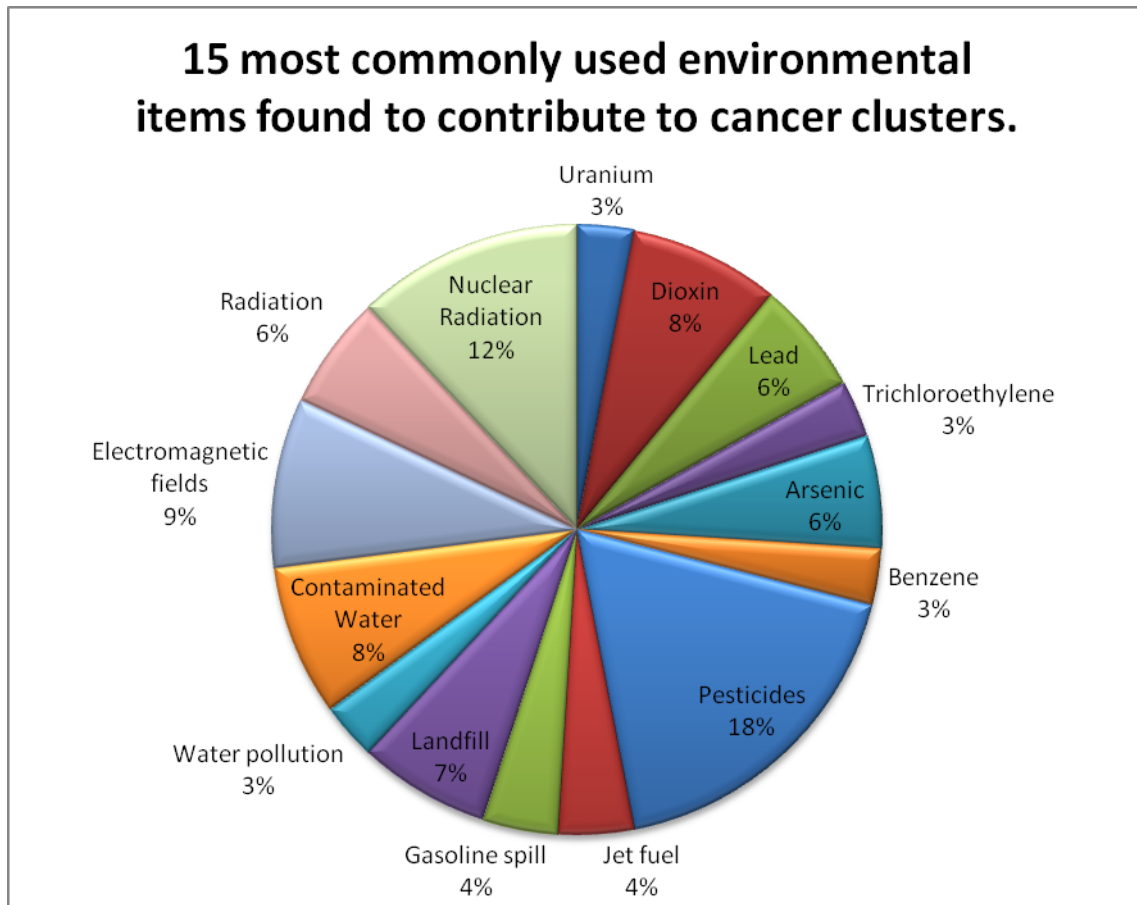
- \_\_\_\_\_ 1. Which statement below correctly describes what happens to DNA during the formation of sex cells?
- When DNA replicates, each of the two new DNA molecules has one old strand and one new strand.
  - As a result of DNA replication, one DNA molecule is completely new and one remains as the original.
  - After the formation of sex cells, the DNA molecules are a mix of old and new strands.
  - Each new sex cell contains a random, but equal amount of the original DNA molecules.
- \_\_\_\_\_ 2. Use this diagram to answer the following question



What two processes are represented by A and B?

- Mitosis and Fertilization
- Meiosis and Fertilization
- Mitosis and Pollination
- Meiosis and Pollination

3. The graph below shows the 15 most commonly reported environmental factors that may have caused cancer clusters. A cancer cluster is an area that has a significantly higher rate of cancer.



(from <http://www.ehponline.org/members/2006/9021/9021.html>)

Specific Chemicals	Chemical Mixes	Pollution Sites	General Exposures
Uranium	Pesticides	Landfill	Electromagnetic fields
Dioxin	Jet fuel	Water pollution	Radiation
Lead	Gasoline spill	Contaminated Water	Nuclear Radiation
Trichloroethylene			
Arsenic			
Benzene			

When the 15 factors are categorized by general type, which environmental factor is most likely to cause a cancer cluster?

- Specific chemicals
- Chemical mixes
- General exposures
- Pollution sites

4. The chart below shows a Punnett square with a cross between parents Ff and ff.

Parents Genotype Ff x ff		
	F	f
f	1	2
f	3	4

In humans, having freckles is dominant to no freckles. Which of the following statements **BEST** describes the child represented in box 1 in the above Punnett Square?

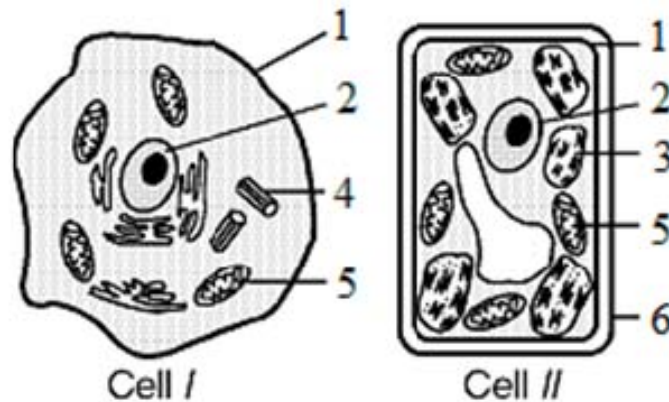
- Homozygous for freckles.
- Homozygous for extra freckles.
- Heterozygous for freckles.
- Heterozygous for no freckles.

5. Plants are unable to move to a new location in response to changes in their environment. Which of the following organelles plays a role in maintaining homeostasis in a plant?

- Cell Wall
- Chloroplast
- Vacuole
- Nucleus

- 6.

In the diagram below, Cell I and II represent typical cells.



In both cells, organelle 5 is the site of

- photosynthesis .
- cellular respiration.
- resource storage.
- protein synthesis.

7. What is the name of the muscle located below the lungs that controls breathing?

- a. Diaphragm
- b. Quadricep
- c. Liver
- d. Trachea

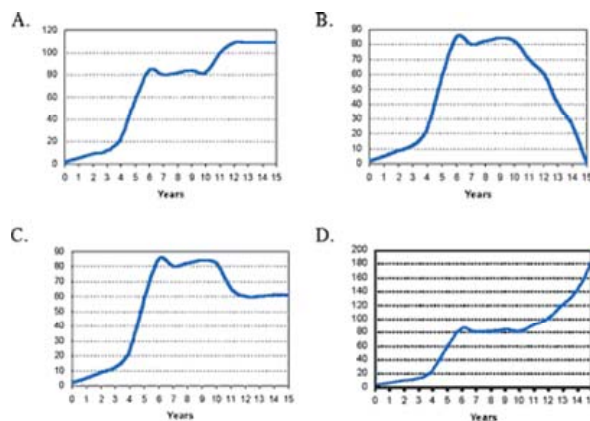
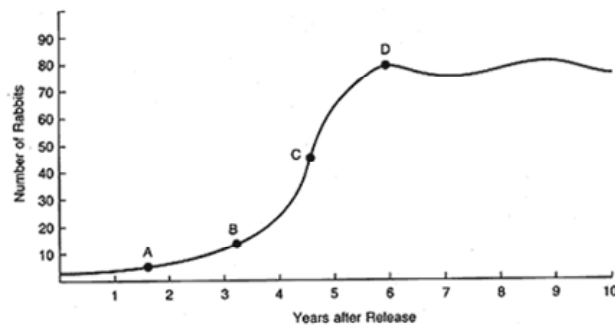
8. The following table lists the population size of six species in four different areas.

	Species A	Species B	Species C	Species D	Species E	Species F
Area 1	20	50	70	20	20	20
Area 2	0	60	80	40	20	0
Area 3	0	0	20	0	0	20
Area 4	40	30	80	110	0	20

Which of the following areas has the **GREATEST** biodiversity?

- a. Area 1
- b. Area 2
- c. Area 3
- d. Area 4

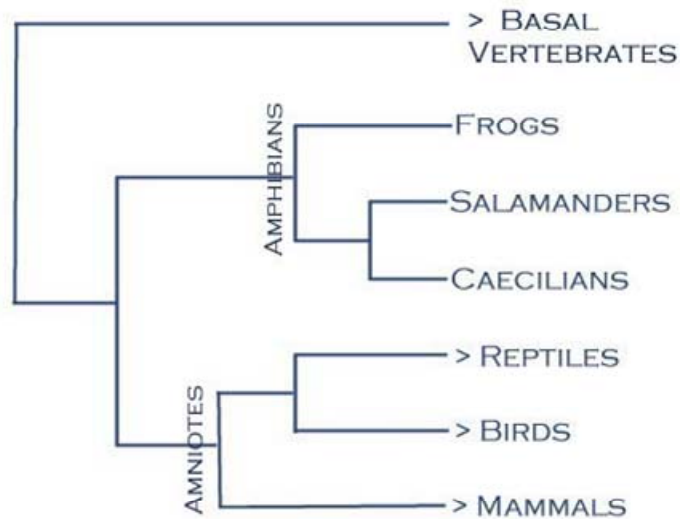
9. The following graph illustrates the population of rabbits following the release of a mating pair into an environment without predators.



Predict what the graph will look like following the introduction of fox at Year 10.

- a. Graph A
- b. Graph B
- c. Graph C
- d. Graph D

10. Compared to most states in the US, the biodiversity in Nevada
- is the least diverse.
  - is the most diverse.
  - ranks in the top 10.
  - ranks in the bottom 10.
11. Use the diagram below to answer the question that follows.

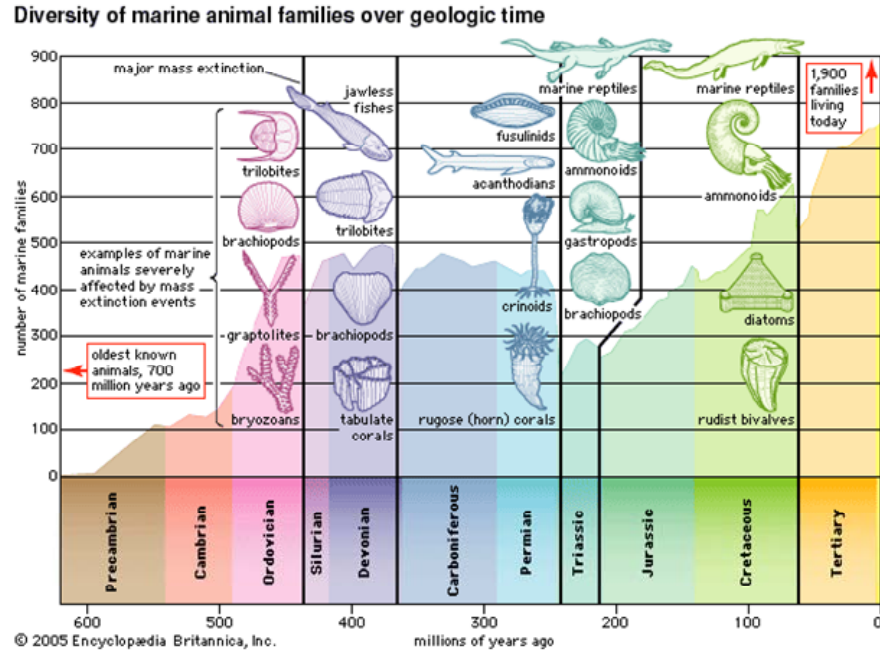


(From <http://whozoo.org/herps/tetrapods.htm>)

According to the diagram, which two groups of organisms are most closely related?

- Frogs and Salamanders
- Reptiles and Birds
- Birds and Mammals
- Mammals and Reptiles

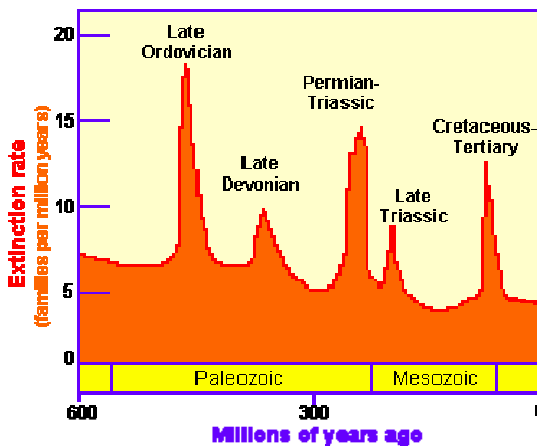
12. The following diagram shows the number of marine animal families over the last 600 million years.



Over geologic time, the diversity of marine animal families has

- increased over the past 600 million years.
- decreased over the past 600 million years.
- decreased, but increased with the past 50 million years.
- increased, but decreased with the past 50 million years.

13. The graph below shows extinction rates through the past 600 million years.

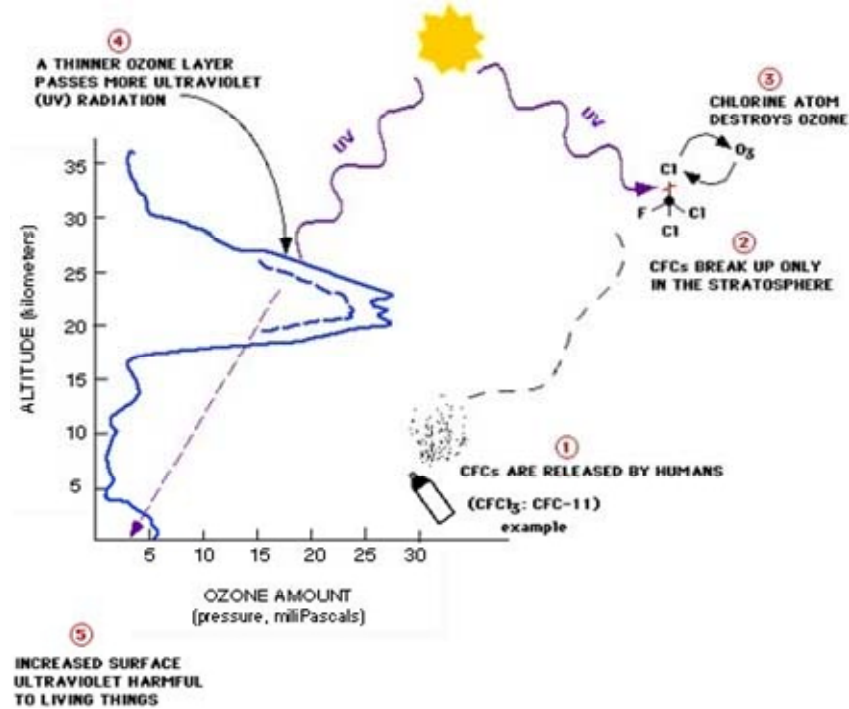


(From [http://www.dailygalaxy.com/my\\_weblog/2007/10/fossil-records-.html](http://www.dailygalaxy.com/my_weblog/2007/10/fossil-records-.html))

The graph demonstrates that extinction rates

- have not changed much through time.
- steadily increase through time.
- steadily decrease through time.
- have increased and decreased through time.

14. Use the diagram to answer the following question.



CFCs increase the amount of ultraviolet radiation reaching Earth because they

- prevent ozone from forming near Earth's surface.
- deplete the amount of ozone in the stratosphere.
- are absorbed into the Sun, where they change into ultraviolet radiation.
- form a layer around Earth, acting like a lens which increases radiation.

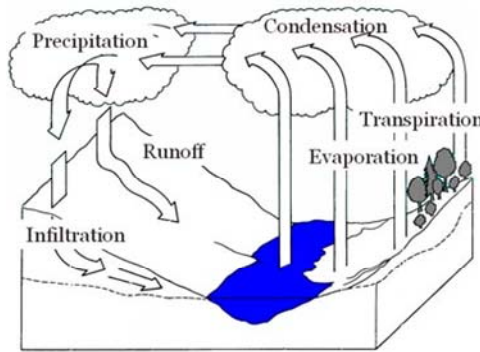
15. Use the table to answer the following question.

Greenhouse Gas	Concentration 1750	Concentration 1995	Percent Change	Natural and Anthropogenic Sources
Carbon Dioxide	280 ppm	360 ppm	29%	organic decay; forest fires; volcanoes; burning fossil fuels; deforestation; land-use change
Methane	0.70 ppm	1.70 ppm	143%	wetlands; organic decay; termites; natural gas and oil extraction; biomass burning; rice cultivation; cattle; refuse landfills
Nitrous Oxide	280 ppb	310 ppb	11%	forests; grasslands; oceans; soils; soil cultivation; fertilizers; biomass burning; burning of fossil fuels
Chlorofluorocarbons (CFCs)	0	900 ppt	Not Applicable	refrigerators; aerosol spray propellants; cleaning solvents
Ozone	Unknown	Varies with latitude and altitude in the atmosphere	Global levels have generally decreased in the stratosphere and increased near the Earth's surface	Created naturally by the action of sunlight on molecular oxygen and artificially through photochemical smog production.

Which of the following is **NOT** a methane source mainly attributable to human population and activity?

- Wetlands areas
- Refuse landfills
- Cattle farming
- Rice cultivation

16. Use the diagram to answer the question below.



(From <http://www.mrsciguy.com/weather.html> - water)

Which process requires the input of heat energy to occur?

- a. Condensation
- b. Infiltration
- c. Runoff
- d. Evaporation

17. Elements from helium through iron are created

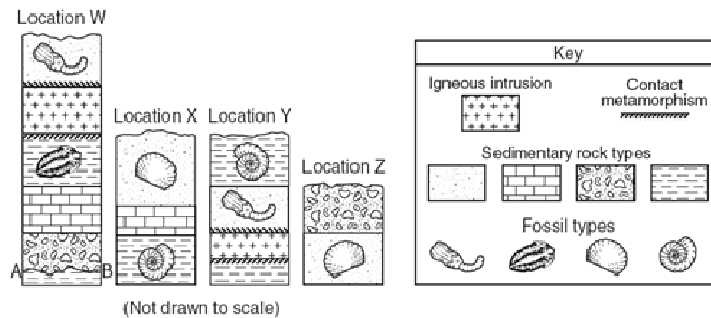
- a. through nuclear fusion in stars, while elements heavier than iron are made in supernova shockwaves.
- b. in supernova shockwaves, while elements heavier than iron are created through nuclear fusion in stars.
- c. by chemical reactions in stars, while elements heavier than iron are made through nuclear reactions.
- d. by nuclear reactions in stars, while elements heavier than iron are made through chemical reactions.

18. Stellar black holes are remnants of very high-mass stars. These black holes will

- a. pull in matter from distant star systems with their huge gravitational attraction.
- b. periodically explode and contract as matter is pulled into the black hole.
- c. capture light that comes within its small (few kilometers-wide) event horizon.
- d. form wormholes that allow matter to travel great distances in a short time.



19. Base your answer to the question on the cross section below, which show widely separated outcrops at locations W, X, Y, and Z. The rock layers have not been overturned. Line AB in the cross section at location W represents an unconformity. Fossils are shown in some of the layers.



(From <http://www.nysedregents.org/testing/scire/es106.pdf>)

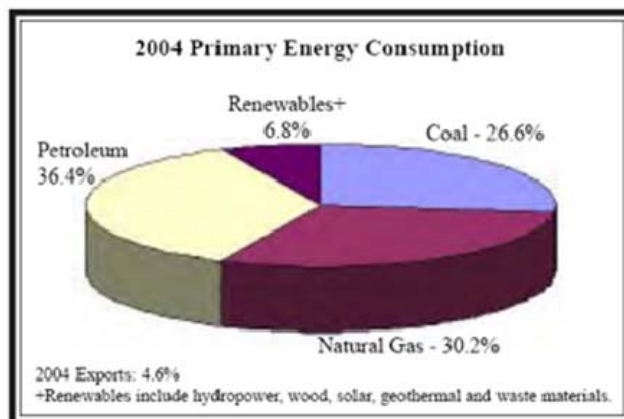
Determine the relative geologic age of the four fossils by correlating the rock layers between these outcrops. Which sequence best illustrates the relative age from **OLDEST** to **YOUNGEST**?



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

20. The movement of tectonic plates is inferred by many scientists to be driven by
- a. tidal motions in the hydrosphere.
  - b. density differences in the troposphere.
  - c. convection currents in the asthenosphere.
  - d. solidification in the lithosphere.
21. What are the two energy sources that are responsible for cycling matter through living and non-living components on Earth?
- a. Sun and Moon
  - b. Moon and tides
  - c. Earth's core and Moon
  - d. Earth's core and the Sun
22. Which of the following statements compares water of today with water that was here 100 million years ago?
- a. Water present 100 million years ago was split through geologic processes into oxygen and hydrogen.
  - b. The water present on Earth today is made of the same atoms but the molecules have been recycled through biologic activity.
  - c. The atoms that made the water then were destroyed when they were used; the atoms that make up water now were made more recently.
  - d. The molecules of water then are the same molecules that exist today.

23. The graph below shows Nevada's primary energy consumption during 2004.



\* Primary energy use includes the losses in electricity generation and distribution.

A major renewable resource for energy usage found in Nevada is geothermal energy. According to the graph what percent of the energy consumed in Nevada during 2004 was renewable?

- a. 6.8%
  - b. 26.6%
  - c. 30.2%
  - d. 36.4%
24. Humus, which is formed by the decay of plant and animal matter, is important for the formation of most
- a. round sediments.
  - b. soils.
  - c. surface bedrock.
  - d. minerals.
25. Which information indicates that new seafloor rock is forming along the mid-ocean ridge and then moving horizontally away from the ridge?
- a. Most volcanoes are located under ocean water and found near the continental shelves.
  - b. Paleomagnetic studies of the ocean floor demonstrate that the orientation of Earth's magnetic field has remained constant.
  - c. Fossils of marine organisms can be found at high elevations on continents.
  - d. The age of the seafloor rock increases as the distance from the mid-ocean ridge increases.

\_\_\_\_ 26. Use the following diagrams to answer the question below.

Diagram 1

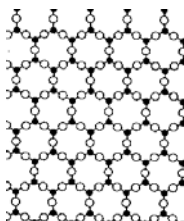


Diagram 2



Diagram 3

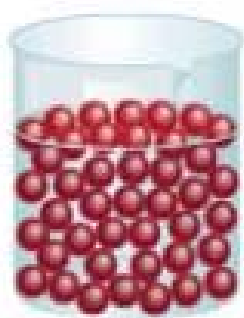


Diagram 4



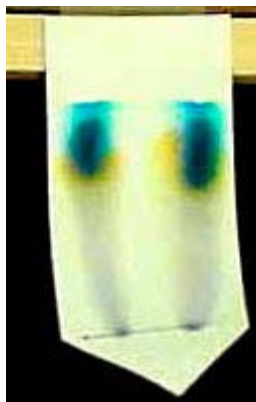
Which of the diagrams best describes the molecular arrangement of oxygen?

- a. Diagram 1
- b. Diagram 2
- c. Diagram 3
- d. Diagram 4

\_\_\_\_ 27. Atomic mass on the periodic table progressively changes left to right and top to bottom because

- a. a proton is being lost.
- b. an electron is being lost.
- c. a proton is being added.
- d. an electron is being added.

28. A student is given an unknown substance and asked to perform paper chromatography to determine whether it is a mixture or a pure substance. She placed several drops of the substance on the paper. Her results are below.



(From <http://www.chemmybear.com/groves/apchem.html>)

She concludes that

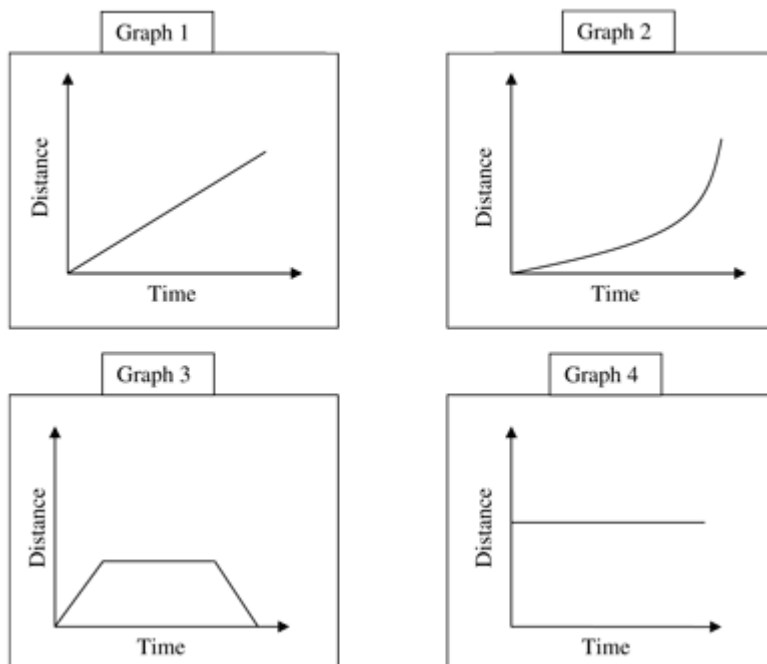
- she has a mixture because multiple bands of color are evident.
  - she has one substance only because the top of the paper is blue.
  - the experiment is inconclusive because the bands are different.
  - chromatography is not a good method of separating substances.
29. Identify the combination of factors that will most likely increase the rate of a chemical reaction.
- Decreasing temperature, using a large block of the solid, and stirring.
  - Decreasing temperature, chopping up the solid block, and stirring.
  - Increasing temperature, using a large block of the solid, and stirring.
  - Increasing temperature, chopping up the solid block, and stirring.
30. Sugar in our body cells reacts very quickly with oxygen. The same sugar will react very slowly with the oxygen in air. The reason for this difference is because
- our bodies are warmer than the air.
  - cells contain catalysts to speed the reaction.
  - the sugar exposed to air is in solid form.
  - the sugar in our cells contains more energy.
31. The formula below represents the chemical reaction between the elements hydrogen and oxygen when the compound water is formed.



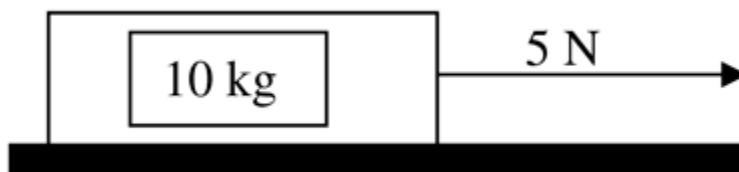
This equation supports the law of conservation of mass because

- the total number of hydrogen and oxygen atoms in the reactants and products is twelve.
- the mass of hydrogen and oxygen in the reactants is equal to the mass of the water in the product.
- atoms of the elements hydrogen and oxygen are in the reactants and also in the products.
- atoms of the elements hydrogen and oxygen react to form molecules of the compound water.

32. Below are four distance vs. time graphs. Use these four graphs to answer the following question. Which graph illustrates a car that is continuously accelerating?



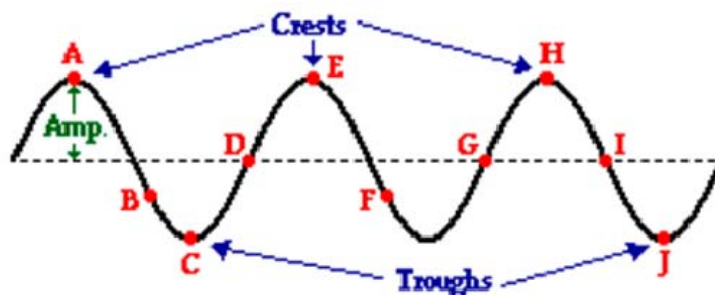
- Graph 1
  - Graph 2
  - Graph 3
  - Graph 4
33. Below is a diagram of a cart on a flat surface being acted upon by a force to the right. Assume that friction is **negligible**. Use the diagram to answer the following question.



If the mass of the cart was increased to 20 kg, what would happen to the acceleration? The acceleration would

- increase.
  - decrease.
  - remain constant.
  - be unable to be determined.
34. Which of the following are different aspects of the same force that allows generators and transformers to work?
- Magnetic forces and electric forces
  - Magnetic forces and nuclear forces
  - Electrical forces and mechanical forces
  - Electrical forces and frictional forces

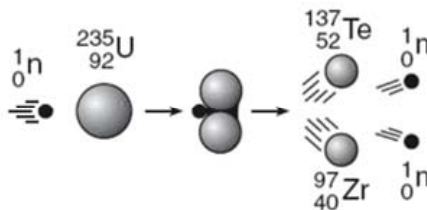
35. If the height of an object, held above Earth's surface, were doubled the gravitational potential energy associated with the object would be
- $\frac{1}{4}$  as great
  - $\frac{1}{2}$  as great.
  - twice as great.
  - four times greater.
36. The diagram below represents a transverse wave traveling in a string. The wave is transferring energy from left to right. Use the diagram to answer the following question.



(From <http://www.glenbrook.k12.il.us/gbssci/Phys/Class/waves/u10l2a.html>)

Predict the direction that a particle at position D will immediately move.

- Down
  - Up
  - Left
  - Right
37. Which wave requires a medium for transmission?
- Light
  - Infrared
  - Radio
  - Sound
38. Use the diagram below to answer the following question



(From <http://www.chemcool.com/regents/nuclearchemistry/aim4.htm>)

Which of the following best describes the reaction?

- Nuclear decay
- Nuclear fusion
- Nuclear fission
- Translocation

39. Use the following table to answer the question below.

Type of Radiation	Alpha	Beta	Gamma
<i>Symbol</i>	$\alpha$	$\beta$	$\gamma$
<i>Relative Mass</i>	4	1/2000	0
<i>Relative Charge</i>	+2	-1	0
<i>Relative Speed</i>	slow	fast	light speed
<i>Penetrating power</i>	low	medium	high
<i>Stopped by</i>	paper	aluminum	lead

If a source is emitting all three types of radiation, what type of container should be used to protect people from the radiation?

- A container that is made of concrete.
  - Using a lead container will be sufficient.
  - No container will prevent the radiation from leaking.
  - Multiple layers of concrete and steel are needed.
40. Which of the following is an application of Uranium-235?
- Generation of energy in nuclear power plants.
  - Dating of ancient artifacts.
  - Detection of cancer tumors.
  - Irradiation of equipment for sterilization.
41. What function does a circuit serve in your home?
- It protects your home against lightning strikes.
  - It increases the voltage from the power lines outside your house.
  - It provides a complete path through which electrical energy can flow.
  - It provides a barrier against electromagnetic radiation from the outside.
42. Study the following data chart.

5 Favorite Foods in My Class				
<i>Pizza</i>	Hamburgers	Sushi	Pop Tarts	Broccoli
14	6	27	25	24

Which of the following graphs would best represent this data?

- Line graph.
- Pie graph.
- Scatter plot.
- Bar graph.

43. Use the following data table to answer the following question.

<b>The Effect of Drop Height on Bounce Height of a Rubber Ball</b>				
<i>Height of Drop (cm)</i>	Height of Bounce (cm)			Average Bounce Height for all Trials (cm)
	Trial 1	Trial 2	Trial 3	
5	4	3	2	3
10	6	6	5	5.6
15	11	12	11	11.3
20	13	14	14	13.7
25	16	15	16	15.7
30	21	20	21	20.7

Based on the data table identify the independent variable.

- Height of Bounce
- Height of Drop
- Average Bounce Height
- Drop Height Effect

44. In 1989, two scientists held a news conference to announce to the world that they had observed controlled nuclear fusion in a glass jar better known as cold fusion technology. It was later determined that their findings were false. Of the following which is not part of the scientific process?
- Peer review of scientific work in research journals.
  - Validation of scientific results through repeated trials.
  - Making claims about unsubstantiated experimental results.
  - Allowing other scientists to review scientific procedures.
45. In her laboratory journal, a microbiologist enters the following information: "Some mold growth was seen on the agar plate that was streaked with bacteria three days ago. Bacterial colonies were observed on the plate, but the area surrounding the mold did not show any bacteria." Which of the following describes the microbiologist's journal entry?
- Prediction.
  - Observation.
  - Conclusion.
  - Hypothesis.
46. Control groups are useful in scientific experiments because they
- are easily identified by the experimenter during the investigation.
  - are cheap and relatively easy to maintain throughout the experiment.
  - prevent the data collection from being contaminated by other variables.
  - provide a standard for comparison with the data collected in the investigation.



47. A student wants to test the hypothesis that catalysts speed up chemical reactions without changing the temperature of the reaction. She decides to use beef liver since she knows that the liver contains catalysts that speed up chemical reactions in mammals. She sets up her reaction tubes as follows: test tube 1 has the reaction chemicals and no liver. Test tube 2 has the reaction chemicals and is set in a warm water bath. Test tube 3 has the reaction chemicals and is set in an ice bath and test tube 4 has the reaction chemicals and a small piece of liver. She observes the following:

<i>Test Tube 1</i>	No reaction
<i>Test Tube 2</i>	Bubbling
<i>Test Tube 3</i>	No reaction
<i>Test Tube 4</i>	Vigorous bubbling, test tube hot

What can you conclude about her experimental design?

- Her reaction design allows her to test her hypothesis.
  - The design does not account for necessary controls.
  - She should use chemical catalysts instead of liver.
  - She has too many data sources from the investigation.
48. A student is conducting an experiment using a Bunsen burner when the fire bell rings. What should he do?
- Exit the room and quickly exit the building following directions from hall monitors.
  - Turn the gas off, exit the room and quickly leave the building.
  - Leave his eye goggles on, exit the room and quickly leave the building.
  - Turn the gas off, pour the reaction down the sink, exit the room and quickly leave the building.
49. As a result of improvements in the field of nanotechnology, silver particles can be used to prevent bacterial growth in clothing, band-aids and food containers. Which of the following statements is a concern for the environment?
- Silver particles are soluble in water and pass through water treatments.
  - Silver particles can prevent bacterial growth reducing infection.
  - Manufacturers of sportswear use silver particles to reduce odor.
  - Silver has not been demonstrated to affect humans when placed in clothes.
50. Read the accompanying quote from C.P. Snow (*The Search*, New York: Charles Scribner's Sons, 1959), then answer the question.

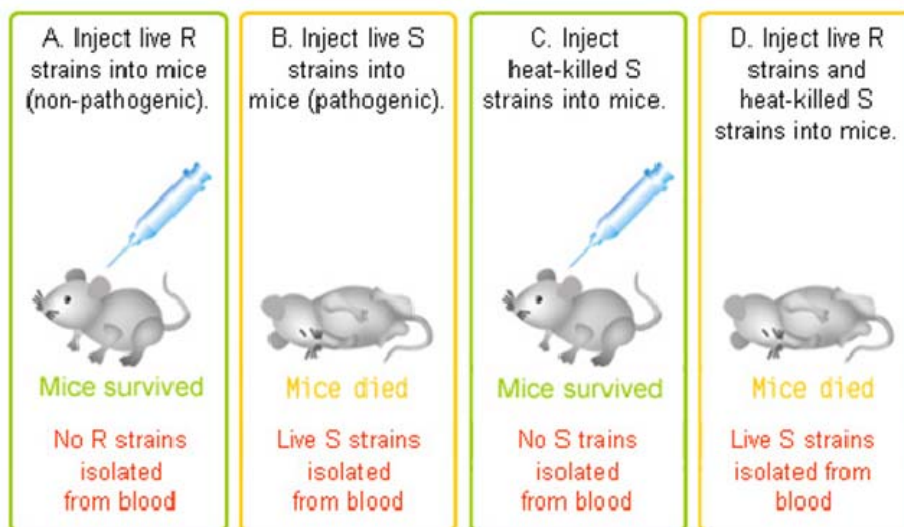
*"The only ethical principle which has made science possible is that the truth shall be told all the time. If we do not penalize false statements made in error, we open up the way, don't you see, for false statements by intention. And of course a false statement of fact made deliberately, is the most serious crime a scientist can commit."*

Snow is putting forth his philosophy that

- to not penalize errors may encourage fraud or lead to a situation where scientists become tolerant of fraud.
  - scientists who are careful to always conduct their research in an ethical manner will never make mistakes.
  - a scientist who deliberately makes a false statement has committed a serious crime, and should be incarcerated.
  - if a scientist makes a false statement even in error it is a serious breach of ethics likely followed by intentional false statements.
51. Which one of the following would constitute scientifically unethical behavior? A scientist
- purposely releases a virus which causes sterility in individuals with genetic disorders.
  - publishes information describing which radioactive substances are deadliest to humans.
  - realizes s/he made an error in experimental design, and then makes public this error.
  - discovers a method to successfully clone mammals, including humans.

52. While the theory of natural selection describes on how organisms over time, it weakness fails to describe how
- the fittest organisms tend to survive over less fit organisms.
  - the environment is involved in evolution.
  - competition between organisms is important to evolution.
  - organisms inherit their traits from their parents.
53. The Big Bang Theory not only helps scientists understand the origins of the universe, but also the understanding of how
- living organisms appeared on our planet.
  - lithospheric plates have shaped planet Earth.
  - atomic elements are created.
  - energy can be converted from one form to another.
54. Which organelle functions in the storage of water and biomolecules?
- Vacuole
  - Cell Wall
  - Endoplasmic Reticulum
  - Chloroplast
55. A neuron is a type of cell found in what type of tissue?
- Nervous
  - Muscle
  - Epithelial
  - Connective
- 56.

Use the diagram below to answer the next question. The diagram illustrates an experiment performed in the early part of the 1900's in work done with two strains of bacteria called the R and S strains. In this experiment, the researcher is trying to determine if he could transform one strain of bacteria into the other strain.



- The R and S strains both cause the mice to die.
- The R and S strains can be changed into the other.
- The S strain is always lethal.
- The R strain can be converted into a lethal strain.

- \_\_\_\_\_ 57. Of the following, which provides evidence that Earth's atmosphere was altered from that of a reducing atmosphere to an oxidizing atmosphere?
- a. Volcanic outgassing poured vast quantities of water vapor into the atmosphere.
  - b. Levels of carbon dioxide have steadily increased over the past several decades.
  - c. Sediments rich in iron (III) oxide have been layered in thick deposits across Earth.
  - d. The majority of hydrogen and helium has escaped Earth's atmosphere into space.
- \_\_\_\_\_ 58. What is inertia?
- a. The force required to change the motion of an object.
  - b. The energy required to change the motion of an object.
  - c. The resistance to changes in motion of an object.
  - d. The momentum of an object in motion.
- \_\_\_\_\_ 59. Which organelles are most directly involved in transporting materials out of the cell?
- a. Nucleus and Ribosomes
  - b. Chloroplast and Mitochondria
  - c. Cell Membrane and Cell wall
  - d. Golgi apparatus and Cell Membrane
- \_\_\_\_\_ 60. The process by which organisms maintain a stable internal environment is called
- a. homeostasis.
  - b. disease.
  - c. equilibrium.
  - d. immunity.

## Practice Science Proficiency Test Spring 2009

### Answer Section

#### MULTIPLE CHOICE

1. ANS: A	DIF: DOK 1	STO: L12A1	TOP: Heredity
2. ANS: B	DIF: DOK 2	STO: L12A3	TOP: Heredity
3. ANS: A	DIF: DOK 2	STO: L12A4	TOP: Heredity
4. ANS: C	DIF: DOK 1	STO: L12A5	TOP: Heredity
5. ANS: C	DIF: DOK 2	STO: L12B1	TOP: Structure of Life
6. ANS: B	DIF: DOK 2	STO: L12B1	TOP: Structure of Life
7. ANS: A	DIF: DOK 1	STO: L12B2	TOP: Structures of Life
8. ANS: A	DIF: DOK 2	STO: L12C2	TOP: Organisms and their Environment
9. ANS: C	DIF: DOK 2	STO: L12C3	TOP: Organisms and their Environment
10. ANS: C	DIF: DOK 1	STO: L12C4	TOP: Organisms and their Environment
11. ANS: B	DIF: DOK 2	STO: L12D1	TOP: Evolution
12. ANS: A	DIF: DOK 2	STO: L12A3	TOP: Evolution
13. ANS: D	DIF: DOK 2	STO: L12D4	TOP: Evolution
14. ANS: A	DIF: DOK 2	STO: E12A2	
TOP: Atmospheric Processes and Water Cycle			
15. ANS: A	DIF: DOK 2	STO: E12A3	
TOP: Atmospheric Processes and Water Cycle			
16. ANS: A	DIF: DOK 1	STO: E12A1	
TOP: Atmospheric Processes and Water Cycle			
17. ANS: A	DIF: DOK 2	STO: E12B2	TOP: Solar System and Universe
18. ANS: C	DIF: DOK 2	STO: E12B4	TOP: Solar System and Universe
19. ANS: B	DIF: DOK 2	STO: E12C1	TOP: Earth's Composition and Structure
20. ANS: C	DIF: DOK 1	STO: E12C2	TOP: Earth's Composition and Structure
21. ANS: D	DIF: DOK 1	STO: E12C3	TOP: Earth's Composition and Structure
22. ANS: D	DIF: DOK 2	STO: E12C3	TOP: Earth's Composition and Structure
23. ANS: A	DIF: DOK 1	STO: E12C4	TOP: Earth's Composition and Structure
24. ANS: B	DIF: DOK 1	STO: E12C5	TOP: Earth's Composition and Structure
25. ANS: D	DIF: DOK 1	STO: E12C2	TOP: Earth's Composition and Structure
26. ANS: B	DIF: DOK 1	STO: P12A1	TOP: Matter
27. ANS: C	DIF: DOK 1	STO: P12A2	TOP: Matter
28. ANS: A	DIF: DOK 2	STO: P12A3	TOP: Matter
29. ANS: D	DIF: DOK 1	STO: P12A4	TOP: Matter
30. ANS: B	DIF: DOK 2	STO: P12A5	TOP: Matter
31. ANS: B	DIF: DOK 1	STO: P12A7	TOP: Matter
32. ANS: B	DIF: DOK 1	STO: P12B1	TOP: Force and Motion
33. ANS: B	DIF: DOK 2	STO: P12B1	TOP: Force and Motion
34. ANS: A	DIF: DOK 2	STO: P12B2	TOP: Force and Motion
35. ANS: C	DIF: DOK 2	STO: P12B4	TOP: Force and Motion
36. ANS: A	DIF: DOK 2	STO: P12C1	TOP: Energy
37. ANS: D	DIF: DOK 1	STO: P12C1	TOP: Energy
38. ANS: C	DIF: DOK 2	STO: P12C3	TOP: Energy

39.	ANS: B	DIF: DOK 2	STO: P12C4	TOP: Energy
40.	ANS: A	DIF: DOK 1	STO: P12C4	TOP: Energy
41.	ANS: C	DIF: DOK 1	STO: P12C6	TOP: Energy
42.	ANS: D	DIF: DOK 1	STO: N12A1	TOP: Science Inquiry
43.	ANS: A	DIF: DOK 2	STO: N12A1	TOP: Science Inquiry
44.	ANS: C	REF: DOK 1	STO: N12A2	TOP: Science Inquiry
45.	ANS: B	DIF: DOK 2	STO: N12A2	TOP: Science Inquiry
46.	ANS: D	DIF: DOK 1	STO: N12A4	TOP: Science Inquiry
47.	ANS: A	DIF: DOK 2	STO: N12A4	TOP: Science Inquiry
48.	ANS: B	DIF: DOK 2	STO: N12A4	TOP: Science Inquiry
49.	ANS: A	DIF: DOK 2	STO: N12B1	TOP: STS
50.	ANS: B	DIF: DOK 2	STO: N12B3	TOP: STS
51.	ANS: A	DIF: DOK 1	STO: N12B3	TOP: STS
52.	ANS: D	DIF: DOK 2	STO: N12B4	TOP: STS
53.	ANS: C	DIF: DOK 2	STO: N12B4	TOP: STS
54.	ANS: A	DIF: DOK 1	STO: L12B2	TOP: Cell Structures and Functions
55.	ANS: A	DIF: DOK 1	STO: L12B2	TOP: Cell Structure and Function
56.	ANS: D	DIF: DOK 2	STO: L12A1	TOP: Heredity
57.	ANS: C	DIF: DOK 2	STO: E12A2	
	TOP: Atmospheric Processes and Earth's Atmosphere			
58.	ANS: C	DIF: DOK 1	STO: P12B1	TOP: Force and Motion
59.	ANS: A	DIF: DOK 1	STO: L12B1	TOP: Cell Structure and Functions
60.	ANS: A	DIF: DOK 1	STO: L12B3	TOP: Cell Structure and Function