Grade 10
Science Practice Test Book

10PTSC

Alaska

Alaska Department of Education
& Early Development

Standards Based Assessments

Spring 2012

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STUDENT'S LAST NAME	STUDENT'S FIRST NAME	MI

STATE STUDENT ID NUMBER

BIRTHDATE			
Month	Day		Year
Jan			
Feb			
Mar	0	0	0 0
Apr	1	1	1
May	2	2	2
Jun	3	3	3
Jul		4	4
Aug		5	5
Sep		6	6
Oct		7	7
Nov		8	8 8
Dec		9	9 9

TEACHER USE ONLY

Fill in all that apply.

- Ⓢ Modified – Altered Exam No Score Generated
- Ⓢ Absent
- Ⓢ Student Refusal
- Ⓢ Parent Refusal
- Ⓢ Suspension
- Ⓢ Invalid No Score Generated

SERIAL#

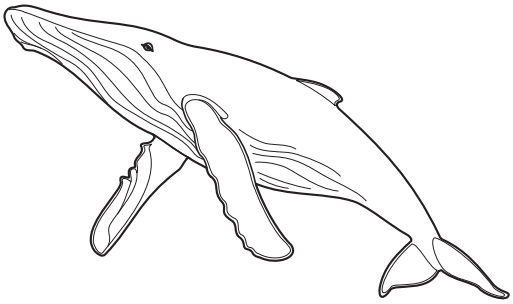
SCIENCE—SAMPLE QUESTIONS

Directions:

Read Sample Questions A and B. For Sample A, fill in the circle that goes with the answer you choose. Be sure to fill in the circle completely and make your mark heavy and dark. If you want to change your answer, completely erase the mark you made before making a new mark. For Sample B, write your answer on the lines provided.

SAMPLE A

The picture below shows a humpback whale.



This animal is correctly classified into which group?

Ⓐ birds

Ⓑ reptiles

Ⓒ mammals

Ⓓ amphibians

GO ON

SAMPLE B

The table below shows data for five Alaska volcanoes.

Alaska Volcanoes

Volcano	Approximate Height in Feet (2007)
Mt. Griggs	7,602
Mt. Denison	7,605
Mt. Shishaldin	9,373
Mt. Spurr	11,070
Mt. Wrangell	14,163

Give two correct conclusions based on these data.

1. _____

_____

_____

_____

2. _____

_____

_____

_____

STOP

1. **During an investigation, three identical beakers containing different amounts of water are heated. The results of the investigation are shown below.**

Investigation Information

Beaker	Amount of Water (grams)	Approximate Energy Added (joules)	Change in Temperature (°C)
1	50	200	1
2	100	400	1
3	200	800	1

Which statement correctly describes the relationship between the amount of water and the energy needed to heat the water?

Ⓐ Larger amounts of water need less energy per gram of water.

Ⓑ Smaller amounts of water need less energy per gram of water.

Ⓒ The energy needed to heat one gram of water depends on the initial amount of water.

Ⓓ The energy needed to heat one gram of water remains the same for different amounts of water.

---

2. **Based on the periodic table, how many neutrons are *most likely* in a neutral atom of potassium (K)?**

Ⓐ 19 neutrons

Ⓑ 20 neutrons

Ⓒ 39 neutrons

Ⓓ 58 neutrons

GO ON

3. Which change would *most likely* lead to speciation?

Ⓐ a decrease in the reproductive rate

Ⓑ a decrease in the predator population

Ⓒ an increase in the frequency of some alleles

Ⓓ an increase in the number of learned behaviors

---

4. An astronomer studies an object in space that emits no visible light. It cannot be directly observed but it does have a concentrated mass. Which object is the astronomer *most likely* studying?

Ⓐ a moon

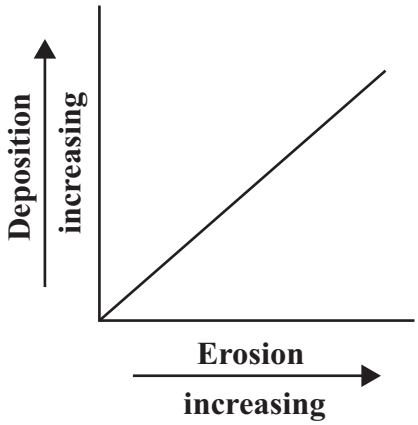
Ⓑ a planet

Ⓒ a nebula

Ⓓ a black hole

5. Which graph *best* represents the relationship between erosion and deposition of glacial material?

Ⓐ



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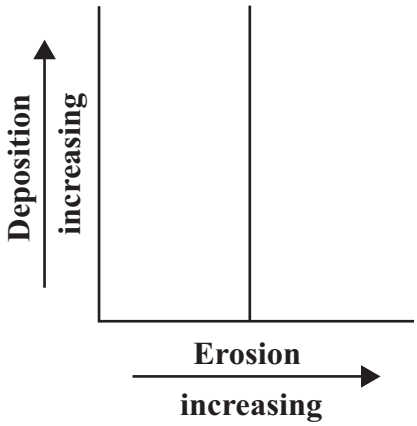

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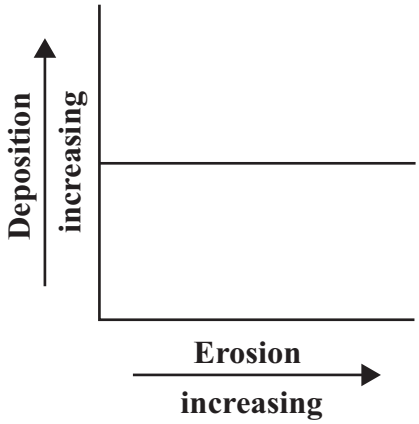

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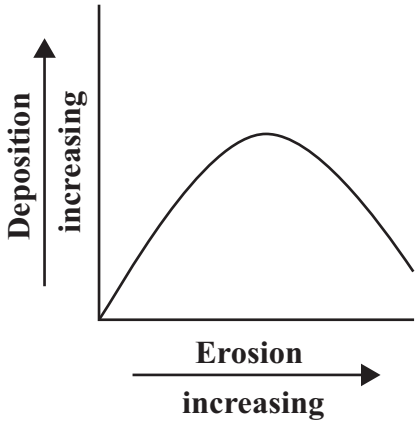

GO ON

6. Which statement would *most likely* cause an unbiased rejection of an existing scientific theory?

Ⓐ A new theory is accepted by a large number of individuals.

Ⓑ A new theory uses complex mathematical equations to explain an event.

Ⓒ A new theory contradicts a theory that has been established for many years.

Ⓓ A new theory is better able to explain and predict phenomena than previous theories.

---

7. Which activity would result in the *most* significant decrease of carbon dioxide in the atmosphere?

Ⓐ reducing the use of fossil fuels

Ⓑ planting fewer trees and grasses

Ⓒ converting forested areas to farm fields

Ⓓ limiting the number of animals in an area

8. Which statement *best* explains why metal wires are often covered with plastic?

Ⓐ Plastic is an insulator that helps limit the amount of electrical charge leaving a wire.

Ⓑ Materials like plastic have many free electrons that help efficiently conduct charge in a wire.

Ⓒ Wires covered with plastic can heat up quickly to improve the movement of electrons in a wire.

Ⓓ A plastic covering improves the flow of electrical current by increasing the resistance of a wire.

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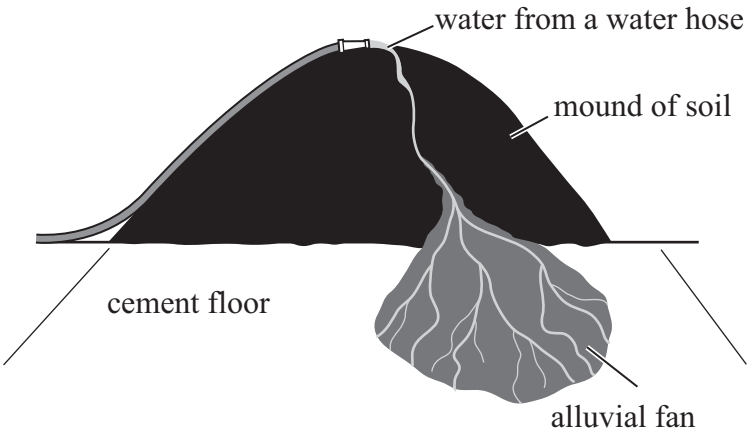
9. The model below shows how an alluvial fan can form.

Alluvial Fan Model



Alluvial fans are common in Alaska. They can form when streams transporting loose material, from a mountain, flow onto a valley floor. Which two processes *most likely* caused the alluvial fan to form on the cement floor?

Ⓐ erosion and deposition

Ⓑ heating and compaction

Ⓒ dissolving and compaction

Ⓓ evaporation and deposition

GO ON

10. Based on the periodic table, which two elements have the *most* similar number of protons?

Ⓐ boron (B) and fluorine (F)

Ⓑ carbon (C) and silicon (Si)

Ⓒ neon (Ne) and chlorine (Cl)

Ⓓ nitrogen (N) and oxygen (O)

---

11. A cell requires a constant energy supply to perform basic life functions. Which two organelles are primarily responsible for energy transformations in the cell?

Ⓐ nucleus and ribosome

Ⓑ lysosome and vacuole

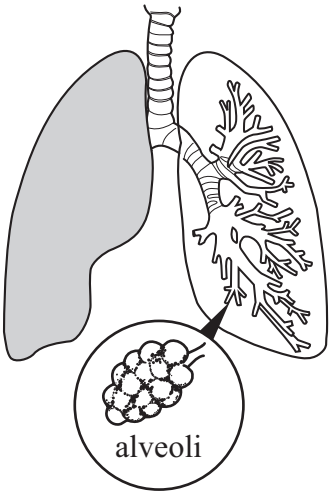
Ⓒ mitochondrion and chloroplast

Ⓓ endoplasmic reticulum and Golgi apparatus

GO ON

This item is worth 2 points.

12. The diagram shows a basic structure of human lungs.



A. Describe how the structure of the alveoli assists in the function of a lung.

B. Identify another organ in the human body that has a similar structure and function relationship as the alveoli inside the lungs.

GO ON

13. Four different motors are tested for their efficiency.

Motor Information

Motor	**Input** (kilowatts)	**Output** (kilowatts)
W	10	7
X	10	6
Y	20	7
Z	20	6

Which motor is *most* efficient?

Ⓐ Motor W

Ⓑ Motor X

Ⓒ Motor Y

Ⓓ Motor Z

---

14. The Sun *most likely* formed from a

Ⓐ nebula.

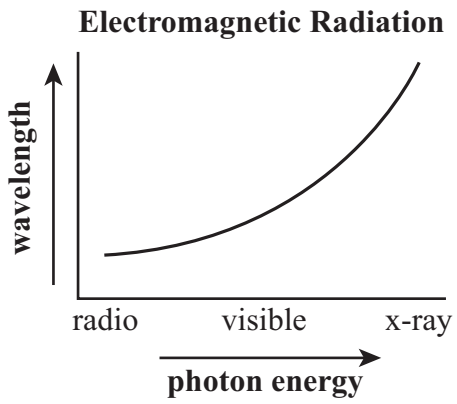
Ⓑ galaxy.

Ⓒ supernova.

Ⓓ black hole.

15. **Which graph *best* represents the relationship between the wavelength and the associated photon energy of different types of electromagnetic radiation?**

Ⓐ



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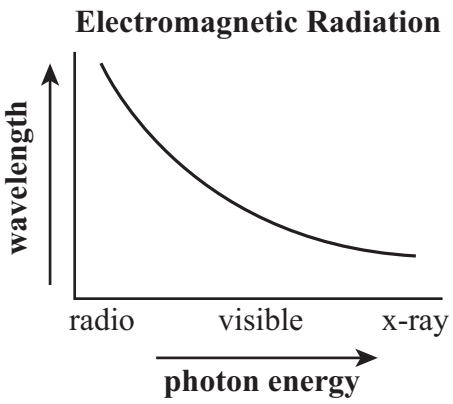

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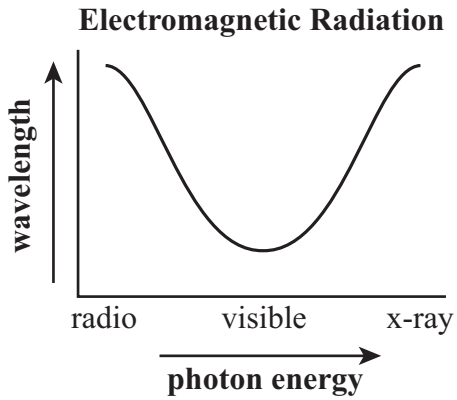

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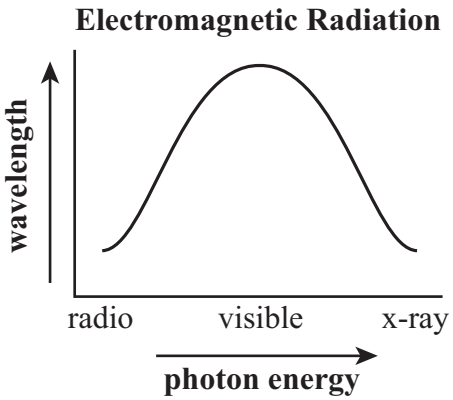

GO ON

16. The data table shows the electric current carried by different lengths of wire.

Current Carried by Different Lengths of Wire

Wire Length (centimeters)	**Current** (amps)
40	0.60
60	0.40
80	0.30
100	0.24
120	0.20

Which statement correctly describes the relationship that exists between the length of a wire and the amount of current?

Ⓐ Twice the length of wire allows twice the amount of current.

Ⓑ Decreasing the amount of current limits the length of the wire.

Ⓒ Twice the amount of current occurs in half the length of wire.

Ⓓ Decreasing the length of the wire decreases the amount of current.

---

17. At the time of Galileo, many people believed that Earth was at the center of the universe. Which statement *best* describes the impact that public opinion had on science?

Ⓐ It had little impact, because most people did not understand astronomy anyway.

Ⓑ It had almost no impact, because science continued to advance in other countries.

Ⓒ It helped the advancement of science, because it guided the thinking of scientists.

Ⓓ It slowed the advancement of science, because it influenced how people thought about new ideas.

GO ON

18. The list shows some possible changes caused by a warming climate in Alaska.

Possible Changes Caused by a Warming Climate

- reduced snowpack
- reduced amount of sea ice
- increased annual precipitation

Based on the list, which of the following will *most likely* increase because of a warming climate?

Ⓐ size of glaciers

Ⓑ volcanic activity

Ⓒ flooding of lakes, streams, and rivers

Ⓓ formation of permafrost in the tundra

---

19. In the 1920s, Alfred Wegener proposed that the continents of Earth move and that at one time they were all connected. In the 1960s, more evidence became available to support Wegener's idea. Which statement is *best* supported by this information?

Ⓐ A hypothesis becomes a law when enough data support the hypothesis.

Ⓑ A hypothesis becomes a fact when it explains an observation or phenomenon.

Ⓒ Science is a collection of knowledge based on historical perspectives.

Ⓓ Science is a collection of knowledge that may or may not change based on data.

GO ON

20. Which function is performed by lysosomes in a cell?

Ⓐ They absorb and pump out excess water.

Ⓑ They produce, modify, and package proteins.

Ⓒ They convert light energy to chemical energy.

Ⓓ They use enzymes to break down large molecules.

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21. Two parallel copper wires have the same electrical current moving in the same direction. Which statement describes how the wires *most likely* interact with each other?

Ⓐ They repel each other.

Ⓑ They attract each other.

Ⓒ They weaken each other.

Ⓓ They strengthen each other.

---

22. Which statement *best* describes how the carbon cycle and oxygen cycle are interrelated?

Ⓐ Animals use CO_2 and release O_2 during respiration.

Ⓑ Animals release H_2O during respiration and CO_2 during transpiration.

Ⓒ Plants use CO_2 and release O_2 during photosynthesis.

Ⓓ Plants release H_2O during transpiration and CO_2 during photosynthesis.

23. Which sequence shows the correct pathway of blood in a human circulatory system?

Ⓐ heart → artery → capillary → vein → heart

Ⓑ heart → vein → capillary → atrium → heart

Ⓒ heart → aorta → ventricle → capillary → heart

Ⓓ heart → ventricle → capillary → aorta → heart

---

24. A student fills two identical beakers with equal volumes of water. For five days, one beaker was kept at 5°C while the other was kept at 25°C. After five days the student observes that the volume of water kept at 25°C was less than the volume of water kept at 5°C. Which question will *best* guide an investigation to understand why warm water evaporates faster than cold water?

Ⓐ Why do gaseous water molecules become liquid water molecules?

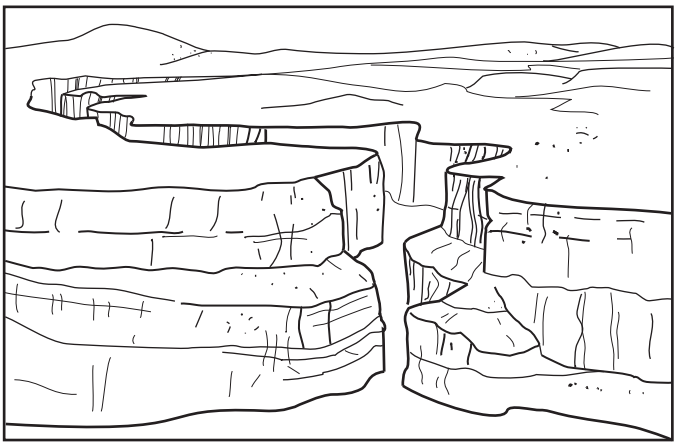
Ⓑ What is the boiling point of water at different atmospheric pressures?

Ⓒ Are unknown forces responsible for the disappearance of water molecules?

Ⓓ How does the amount of thermal energy affect the attraction between water molecules?

25. The drawing shows an effect of erosion on an environment.

Rocky Canyon



Which of the following was *most likely* responsible for the formation of the rocky canyon?

Ⓐ moving water

Ⓑ blowing wind

Ⓒ depositing sediment

Ⓓ freezing temperatures

---

26. Two populations of the same rodent species living on opposite sides of a canyon have significant differences in their structures. The environment on each side of the canyon is different. The populations are unable to interact. Based on the information, which statement *best* predicts a future outcome?

Ⓐ One population of rodents will become extinct.

Ⓑ The two populations of rodents will become two separate species.

Ⓒ One population of rodents will migrate to the other side and adapt to the new environment.

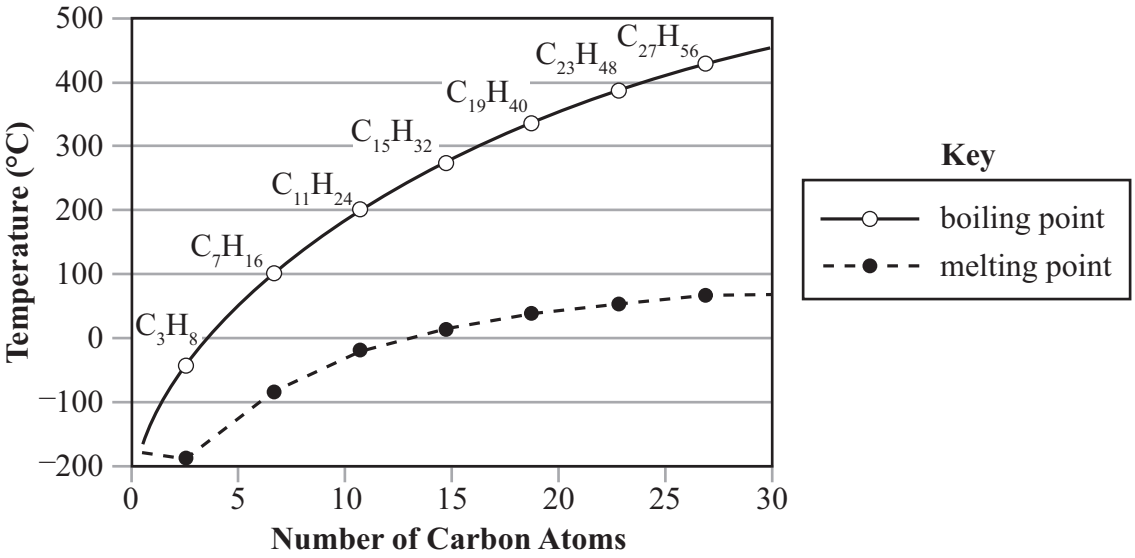
Ⓓ The two populations of rodents will compete for limited resources, and only one will remain in the area.

GO ON

This question is worth 4 points.

27. Alkanes are chemical compounds that contain only carbon (C) and hydrogen (H) atoms. These atoms are held together only by single bonds and form long chains of atoms. The graph shows the boiling points and melting points of several different alkane compounds.

Relationship between Number of Carbon Atoms and Boiling and Melting Points of Alkanes



A. Describe the relationship between the number of carbon atoms in an alkane compound and its boiling and melting points.

_____

_____

_____

_____

GO ON

B. Predict the boiling point of $C_{29}H_{60}$.

_____

C. Identify an alkane compound that can be classified as a liquid at 25°C, and explain the reason for choosing this alkane compound.

Alkane Compound: _____

Explanation: _____

_____

_____

_____

_____

_____

GO ON

28. Current evidence suggests that a population of sea otters in southwest Alaska has significantly declined in recent years. The habitat of these sea otters is also used by humans for oil and gas development, fishing, and transportation. Which action would *best* allow scientists to help prevent the loss of sea otters while still considering the diverse interests of humans in the area?

Ⓐ collecting data on how many sea otters are born each year

Ⓑ collecting data on many possible causes of the decline of sea otters

Ⓒ comparing the number of sea otters observed today and 100 years ago

Ⓓ comparing the number of sea otters observed in the morning and the afternoon

---

29. What is the result of the radioactive decay of carbon-14 to nitrogen-14?

Ⓐ The nuclei become less stable.

Ⓑ The nuclei become more stable.

Ⓒ The number of protons decreases.

Ⓓ The number of neutrons increases.

30. An organ in the human body removes wastes from the bloodstream. Which list correctly describes the path the wastes follow once they are removed by this organ?

Ⓐ vein, artery, lungs

Ⓑ artery, lungs, vein

Ⓒ ureter, bladder, urethra

Ⓓ urethra, ureter, bladder

---

31. Which statement describes how an increased concentration of carbon dioxide (CO_2) will *most likely* affect the global climate?

Ⓐ It will cause less energy to be reflected back to Earth.

Ⓑ It will cause more energy to be reflected back to Earth.

Ⓒ It will cause a decrease in the thickness of the ozone layer.

Ⓓ It will cause an increase in the thickness of the ozone layer.

---

32. Which statement *best* describes the Big Bang theory?

Ⓐ A supernova collapsed and released matter.

Ⓑ An explosion from a star released large particles of matter.

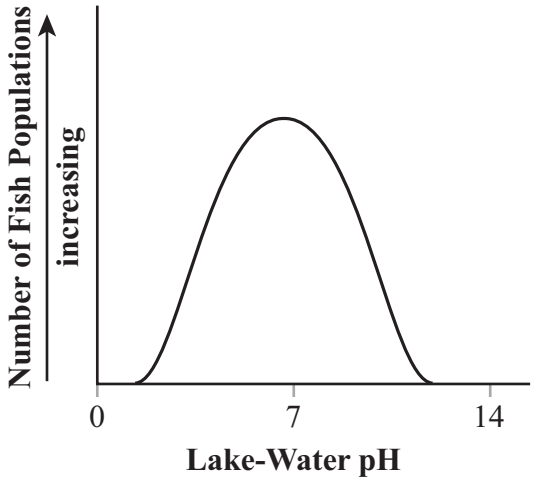
Ⓒ Large amounts of energy and matter were released from a black hole.

Ⓓ A very condensed mass of matter and energy expanded and then cooled.

GO ON

33. A student analyzes a graph showing a general trend in fish populations and lake-water pH.

Fish Populations vs. Lake-Water pH



The student develops a paired hypothesis based on the graph.

Student's Paired Hypothesis

H_0 = Fish populations decrease as lake-water pH approaches 7.
H_a = Fish populations increase as lake-water pH approaches 7.

Which statement is *best* supported by the information?

Ⓐ The null hypothesis (H_0) should be rejected because the number of fish populations is greatest at a pH of 7.

Ⓑ The null hypothesis (H_0) should be accepted because the number of fish populations is lowest at a pH of 7.

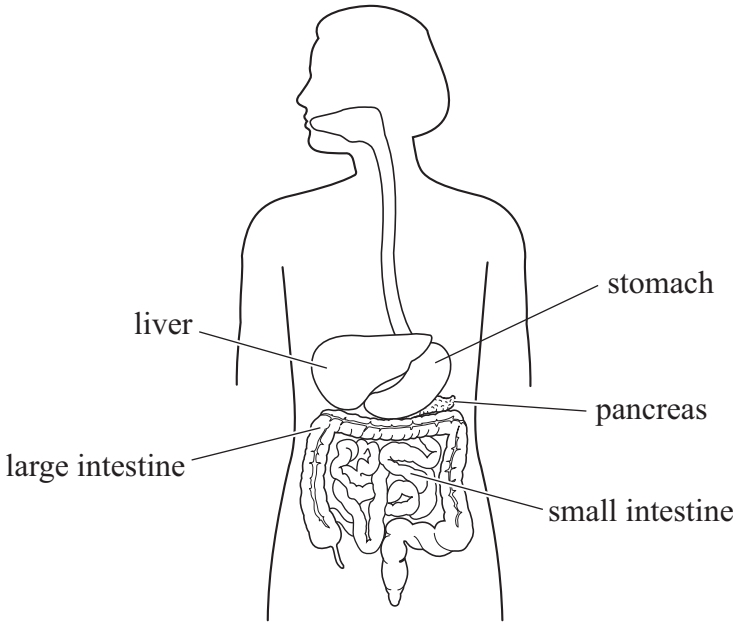
Ⓒ The alternate hypothesis (H_a) should be rejected because the number of fish populations is greatest at a pH lower than 7.

Ⓓ The alternate hypothesis (H_a) should be accepted because the number of fish populations is greatest at a pH higher than 7.

GO ON

34. The diagram shows the human digestive system.

Human Digestive System



After food passes through the stomach, which organ will it go to next?

Ⓐ pancreas

Ⓑ small intestine

Ⓒ large intestine

Ⓓ liver

---

35. A polar bear walks on sea ice to hunt prey living in the water. Which statement *best* describes an interaction between the polar bear and the sea ice?

Ⓐ The force applied by the polar bear is less than the force applied by the sea ice.

Ⓑ The force applied by the polar bear is greater than the total force applied by the sea ice.

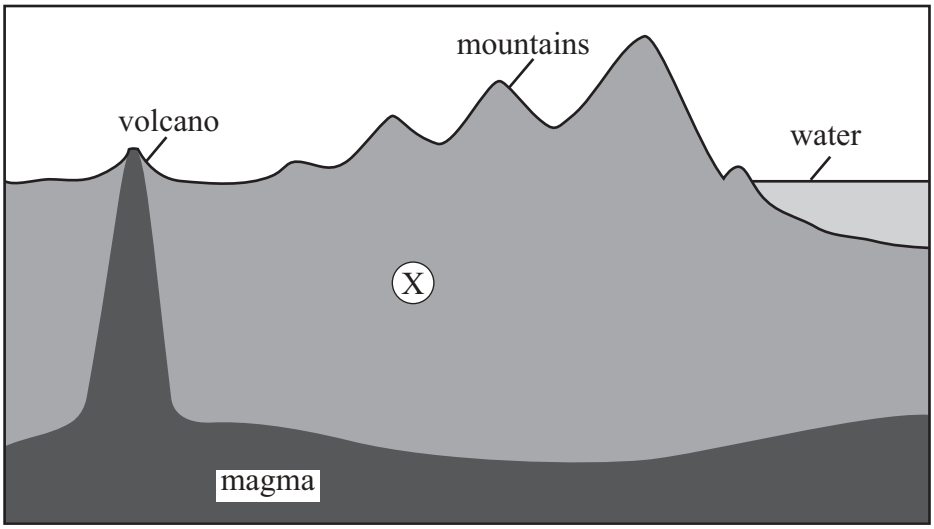
Ⓒ The polar bear applies no force to the sea ice because the sea ice applies a force to the polar bear.

Ⓓ The polar bear applies a force to the sea ice, and the sea ice exerts an equal and opposite force on the polar bear.

GO ON

36. The diagram shows a cross-section of Earth.

Cross-Section of Earth



What is *most likely* happening to rock at location X?

Ⓐ Rock is being dissolved.

Ⓑ Rock is being compressed.

Ⓒ Rock is being deposited as sediment.

Ⓓ Rock is being weathered and transported.

GO ON

37. A certain fruit's seeds need to be exposed to stomach acid before they can sprout. A single gene determines whether the fruit will be red or brown. The brown fruits are less likely to be picked and eaten by animals. Which statement describes the *most likely* effect of the animals' color preference for the fruit?

Ⓐ The brown fruit trait will decrease in the population.

Ⓑ The brown fruit trait will increase in the population.

Ⓒ The number of red fruit plants will decrease because the red fruit will be eaten more often.

Ⓓ The red fruit plants will increase the amount of fruit produced in response to the high demand.

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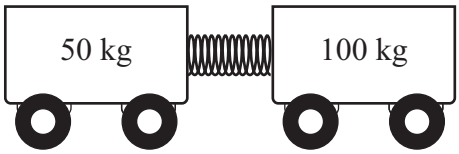
38. Two carts on wheels are attached together by a compressed spring.



Which statement describes the forces acting on the carts when the spring is released?

Ⓐ The action force is half the amount of the reaction force.

Ⓑ The action force is twice the amount of the reaction force.

Ⓒ The action-reaction forces are equal and in the same direction.

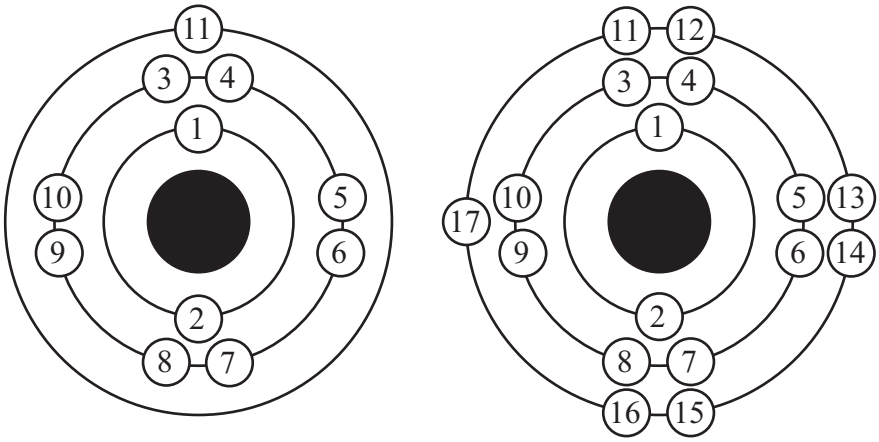
Ⓓ The action-reaction forces are equal and in opposite directions.

GO ON

This question is worth 2 points.

39. The diagrams show Bohr models for sodium and chlorine. The electrons are numbered for neutral sodium and chlorine atoms.

Numbered Bohr Models



sodium (metal) chlorine (nonmetal)

A. Using the periodic table, identify the type of bond that would form between sodium (Na) and chlorine (Cl).

_____

B. Describe the electron behavior when this bond forms. Be sure to include which electron(s) in the diagram will be involved with this bond.

_____

_____

_____

_____

GO ON

40. The chart below displays data collected during a strawberry experiment.

Strawberry Experiment

Tray Number	Treatment	Average Mass of Strawberry (g)	Average Mass of Sugar per Strawberry (g)
1	fertilizer	24	1.4
2	fertilizer	23	1.3
3	fertilizer	23	1.4
4	fertilizer	21	1.1
5	fertilizer	22	1.3
6	no fertilizer	20	1.1
7	no fertilizer	18	1.1
8	no fertilizer	17	1.0
9	no fertilizer	17	0.9
10	no fertilizer	16	0.9

A scientist grew 200 strawberry plants in large trays of 20 plants each. All 10 trays were kept in the same greenhouse, but five of them were given fertilizer. The strawberries were measured, counted, collected, and analyzed for sugar content. The scientist concluded that plants given fertilizer produce larger and sweeter strawberries. Which evidence contradicts the scientist's conclusion?

Ⓐ Plants with fertilizer produce smaller strawberries with less sugar per gram of strawberry.

Ⓑ Plants without fertilizer produce larger strawberries with more sugar per gram of strawberry.

Ⓒ The amount of sugar per gram of strawberry is similar for most of the plants, when size is compared to amount of sugar.

Ⓓ The amount of sugar per gram of strawberry is greater in plants without fertilizer, when size is compared to amount of sugar.

GO ON

41. The melting and boiling points of four substances were measured in a laboratory. The results are shown in the data table.

Substance	Melting Point (°C)	Boiling Point (°C)
$C_2H_5CO_2H$	–21	141
CH_3CONH_2	80	221
$C_3H_5(OH)_3$	17	287
CH_3OCH_3	–140	–24

Which substance is *most likely* a gas at 25°C?

Ⓐ $C_2H_5CO_2H$

Ⓑ CH_3CONH_2

Ⓒ $C_3H_5(OH)_3$

Ⓓ CH_3OCH_3

GO ON

42. Which statement *best* explains the function of the liver?

Ⓐ It helps to clear toxins from the blood.

Ⓑ It makes proteins to regulate oxygen levels.

Ⓒ It allows calcium to be absorbed by the bones.

Ⓓ It secretes hormones involved in development.

---

43. A biologist captured and identified young lobsters. Once a lobster was captured, a tag was attached, and information about the individual was entered into a database to learn more about the life cycle of lobsters. Which scientific processes does the tagging of lobsters *best* represent?

Ⓐ observing and measuring

Ⓑ inferring and hypothesizing

Ⓒ classifying and experimenting

Ⓓ communicating and predicting

GO ON

44. What is the *best* evidence that Alaska is an area with tectonic activity?

Ⓐ the presence of lakes and rivers

Ⓑ the amount of thawed permafrost

Ⓒ the frequency of strong earthquakes

Ⓓ the number of icebergs from glaciers

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45. Which statement *best* supports a current scientific understanding of the universe?

Ⓐ The universe is contracting because some stars are smaller than the Sun.

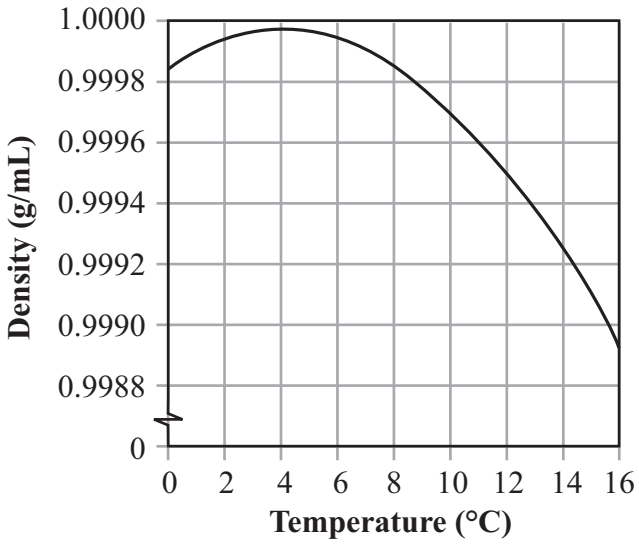
Ⓑ The continuous formation of stars is evidence that the universe is expanding.

Ⓒ The universe is contracting because some galaxies are colliding with other planets.

Ⓓ The increasing distances between galaxies is evidence that the universe is expanding.

46. The graph shows the effect of temperature on the density of water.

Effect of Temperature on the Density of Water



Which statement is *best* supported by the data in the graph?

Ⓐ Warm water is more dense than cold water.

Ⓑ Cold water is more dense than warm water.

Ⓒ Water is less dense at 4°C and more dense at 16°C.

Ⓓ Water is more dense at 4°C and less dense at 16°C.

---

47. Research has led to improvements in medical procedures. Which characteristics would *best* help a scientist who works on developing new medical materials and methods?

Ⓐ organized and kind

Ⓑ curious and creative

Ⓒ well-spoken and generous

Ⓓ detail-oriented and athletic

GO ON

48. Why are electrical wires made mostly of metal?

Ⓐ Metals are insulators, which allow the movement of electrons.

Ⓑ Metals are insulators, which restrict the movement of electrons.

Ⓒ Metals are conductors, which allow the movement of electrons.

Ⓓ Metals are conductors, which restrict the movement of electrons.

---

49. Which two industries have experienced the *most* significant increase in competition for resources as a result of increased biofuel production?

Ⓐ agriculture and recreation

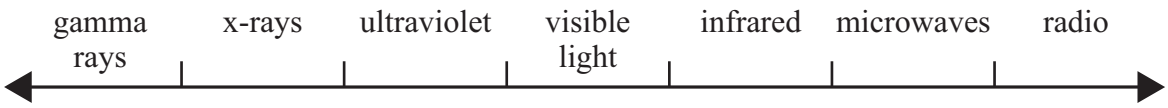
Ⓑ agriculture and transportation

Ⓒ medical and recreation

Ⓓ medical and transportation

50. The diagram below shows the electromagnetic spectrum.

Electromagnetic Spectrum



Compared to a photon of x-ray radiation, a photon of infrared radiation has

Ⓐ a longer wavelength and less energy.

Ⓑ a longer wavelength and more energy.

Ⓒ a shorter wavelength and less energy.

Ⓓ a shorter wavelength and more energy.

---

51. During the medieval period, the intellectual movement called scholasticism emphasized complex reasoning about problems. Which development was *most likely* influenced by scholasticism?

Ⓐ publishing experimental results for validation

Ⓑ the standardized reporting of experimental bias

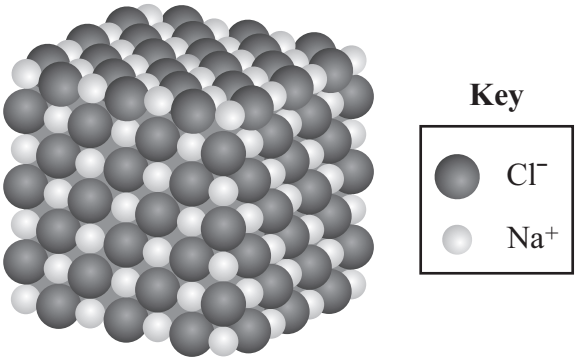
Ⓒ the scientific method of observation and analysis

Ⓓ technologies for precise and practical observation

GO ON

52. The model below shows the crystalline structure of sodium chloride.

Sodium Chloride



Which statement *best* describes the behavior of the valence electrons as they form chemical bonds?

Ⓐ Each sodium and chlorine atom shares one electron between both atoms.

Ⓑ Each sodium and chlorine atom shares two electrons between both atoms.

Ⓒ One electron from each sodium atom is transferred to each chlorine atom.

Ⓓ Two electrons from each chlorine atom are transferred to each sodium atom.

---

53. Which process is part of the carbon cycle and is *least* dependent on the water cycle?

Ⓐ photosynthesis

Ⓑ decomposition

Ⓒ rock weathering

Ⓓ volcanic eruption

GO ON

54. A warming of the global climate can cause thawing of permafrost. Scientists have evidence that some of the permafrost south of the Yukon River is thawing. Which effect will *most likely* occur first as the permafrost continues to thaw?

Ⓐ an increase in plant diversity

Ⓑ a decrease in the rate of soil erosion

Ⓒ an increase in infiltration of groundwater

Ⓓ a decrease in migration of animal populations

---

55. Isaac Newton's introduction of the law of universal gravitation was an important scientific advancement. Which statement *best* explains why this law became widely accepted in the scientific community?

Ⓐ It used new technologies to expand the amount of available information.

Ⓑ It provided a consistent model that could be applied to large amounts of data.

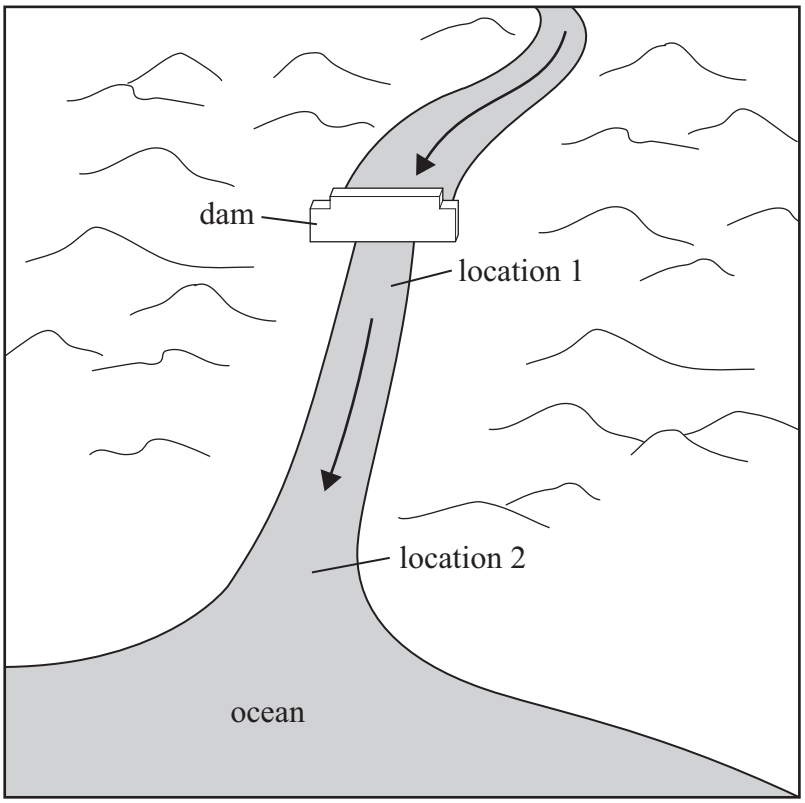
Ⓒ It questioned the validity of conclusions made by other scientists using other methods.

Ⓓ It replaced the role of scientific observations when investigating mathematical formulas.

This question is worth 4 points.

56. A dam is on a river that flows through a mountain valley toward an ocean. Engineers decide to release about 25% more water downstream to better manage the flow of the river.

Locations Near Dam



The increased amount of water physically changed the riverbed at two locations differently.

A. Identify a physical change to the riverbed that likely occurred at location 1.

Describe a process that likely caused this physical change to the riverbed at location 1.

B. Identify a physical change to the riverbed at location 2 that would be different than location 1.

Describe a process that would have likely caused the physical change at location 2.

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PERIODIC TABLE OF THE ELEMENTS

KEY

79	Atomic Number
Au	Element Symbol
Gold	Element Name
196.97	Average Atomic Mass*

	1 IA	2 IIA	3 IIIB	4 IVB	5 VB	6 VIB	7 VIIB	8 VIIIB	9 VIIIB	10 VIIIB	11 IB	12 IIB	13 IIIA	14 IVA	15 VA	16 VIA	17 VIIA	18 VIIIA
1	1 H Hydrogen 1.01																	2 He Helium 4.00
2	3 Li Lithium 6.94	4 Be Beryllium 9.01											5 B Boron 10.81	6 C Carbon 12.01	7 N Nitrogen 14.01	8 O Oxygen 16.00	9 F Fluorine 19.00	10 Ne Neon 20.18
3	11 Na Sodium 22.99	12 Mg Magnesium 24.31											13 Al Aluminum 26.98	14 Si Silicon 28.09	15 P Phosphorus 30.97	16 S Sulfur 32.07	17 Cl Chlorine 35.45	18 Ar Argon 39.95
4	19 K Potassium 39.10	20 Ca Calcium 40.08	21 Sc Scandium 44.96	22 Ti Titanium 47.87	23 V Vanadium 50.94	24 Cr Chromium 52.00	25 Mn Manganese 54.94	26 Fe Iron 55.85	27 Co Cobalt 58.93	28 Ni Nickel 58.69	29 Cu Copper 63.55	30 Zn Zinc 65.41	31 Ga Gallium 69.72	32 Ge Germanium 72.64	33 As Arsenic 74.92	34 Se Selenium 78.96	35 Br Bromine 79.90	36 Kr Krypton 83.80
5	37 Rb Rubidium 85.47	38 Sr Strontium 87.62	39 Y Yttrium 88.91	40 Zr Zirconium 91.22	41 Nb Niobium 92.91	42 Mo Molybdenum 95.94	43 Tc Technetium (98)	44 Ru Ruthenium 101.07	45 Rh Rhodium 102.91	46 Pd Palladium 106.42	47 Ag Silver 107.87	48 Cd Cadmium 112.41	49 In Indium 114.82	50 Sn Tin 118.71	51 Sb Antimony 121.76	52 Te Tellurium 127.60	53 I Iodine 126.90	54 Xe Xenon 131.29
6	55 Cs Cesium 132.91	56 Ba Barium 137.33	57 La Lanthanum 138.91	72 Hf Hafnium 178.49	73 Ta Tantalum 180.95	74 W Tungsten 183.84	75 Re Rhenium 186.21	76 Os Osmium 190.23	77 Ir Iridium 192.22	78 Pt Platinum 195.08	79 Au Gold 196.97	80 Hg Mercury 200.59	81 Tl Thallium 204.38	82 Pb Lead 207.2	83 Bi Bismuth 208.98	84 Po Polonium (209)	85 At Astatine (210)	86 Rn Radon (222)
7	87 Fr Francium (223)	88 Ra Radium (226)	89 Ac Actinium (227)															

58 Ce Cerium 140.12	59 Pr Praseodymium 140.91	60 Nd Neodymium 144.24	61 Pm Promethium (145)	62 Sm Samarium 150.36	63 Eu Europium 151.96	64 Gd Gadolinium 157.25	65 Tb Terbium 158.93	66 Dy Dysprosium 162.50	67 Ho Holmium 164.93	68 Er Erbium 167.26	69 Tm Thulium 168.93	70 Yb Ytterbium 173.04	71 Lu Lutetium 174.97
90 Th Thorium 232.04	91 Pa Protactinium 231.04	92 U Uranium 238.03	93 Np Neptunium (237)	94 Pu Plutonium (244)	95 Am Americium (243)	96 Cm Curium (247)	97 Bk Berkelium (247)	98 Cf Californium (251)	99 Es Einsteinium (252)	100 Fm Fermium (257)	101 Md Mendelevium (258)	102 No Nobelium (259)	103 Lr Lawrencium (262)

* Numbers within parentheses refer to the atomic mass of the most stable isotope.

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Alaska

Grade 10
Science Practice Test Book
Form 10PTSC

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