

1 Which of the following sets contains only objects that shine as a result of reflected light?

- A moons, planets, and comets
- B moons, comets, and stars
- C planets, stars, and comets
- D planets, stars, and moons

CR0169

2 An object composed mainly of ice is orbiting the Sun in an elliptical path. This object is most likely

- A a planet.
- B an asteroid.
- C a meteor.
- D a comet.

CR0660

3 Copper (Cu) reacts with oxygen (O) to form copper oxide (CuO). The properties of CuO are most likely

- A different from copper or oxygen.
- B similar to both copper and oxygen.
- C similar only to copper.
- D similar only to oxygen.

CR0666

4 The following equations represent chemical reactions.

Chemical Reactions

1	$2\text{Na} + 2\text{H}_2\text{O} \rightarrow \text{NaOH} + \text{H}_2$
2	$\text{H}_2 + \text{O}_2 \rightarrow \text{H}_2\text{O}$
3	$\text{Mg} + \text{Cl}_2 \rightarrow \text{MgCl}_2$
4	$\text{NaOH} + \text{MgCl}_2 \rightarrow \text{NaCl} + \text{MgOH}$

Which equation shows that the total mass during a chemical reaction stays the same?

- A 1
- B 2
- C 3
- D 4

CR0660

5 Which of the following forms of energy is released or absorbed in most chemical reactions?

- A light energy
- B electrical energy
- C sound energy
- D heat energy

CR0663

6 As a sample of water turns to ice,

- A new molecules are formed.
- B the mass of the sample is increased.
- C the arrangement of the molecules changes.
- D energy is absorbed by the molecules.

CR0662

- 7 The table below shows the pH and reaction to litmus of four body fluids.

Body Fluid	pH	red litmus	blue litmus
Blood	7.4	turns blue	no change
Bile	8.2	turns blue	no change
Saliva	6.8	no change	turns red
Gastric Juice	1.7	no change	turns red

These data indicate that gastric juice is

- A very acidic.
- B very basic.
- C positively charged.
- D negatively charged.

022006

- 8 What characteristic of carbon (C) makes it essential to living organisms?

- A Carbon forms crystal structures under certain conditions.
- B Carbon can exist as a solid, liquid, or gas.
- C Carbon bonds in many ways with itself to form chains.
- D Carbon exists in radioactive forms.

022006

- 9 Which of the following elements is *best* able to combine with itself and hydrogen (H) to form large molecules?

- A sodium (Na)
- B lithium (Li)
- C sulfur (S)
- D carbon (C)

022006

- 10 Which of the following compounds is *most likely* to be part of living organisms?

- A $C_6H_{12}O_6$
- B BF_3
- C $MoCl_2$
- D CsI

022006

Answers:

1. A

2. D

3. A

4. C

5. D

6. C

7. A

8. C

9. D

10. A