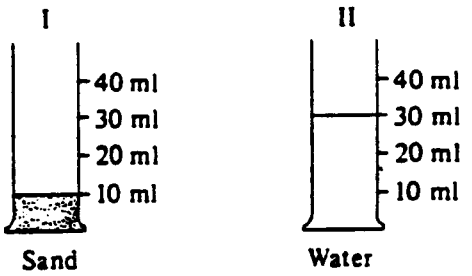
1. When the dry sand from cylinder I in the figure shown is added to the water in cylinder II, where will the water level in cylinder II be?



A. Below the 30-ml mark

B. At the 30-ml mark

C. Above the 30-ml mark but below the 40-ml mark

D. At the 40-ml mark

2. In which of the following states of matter are the molecules generally most tightly packed?

A. Solid B. Liquid C. Gas

3. A beaker containing crushed ice and water is heated. The temperature of the beaker's contents is recorded every 30 seconds. A graph of the data appears as shown.

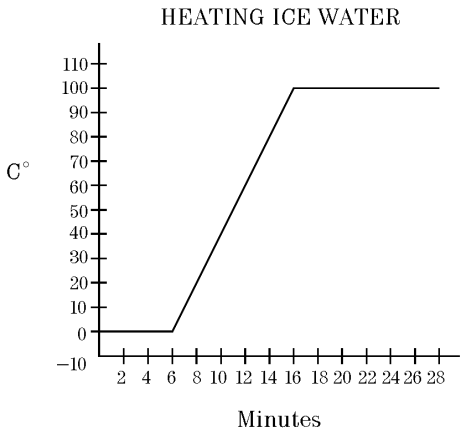
Approximately when does active boiling of the contents of the beaker occur?

A. From the beginning of the process

B. Between 2 and 6 minutes after the heating begins

C. Between 6 and 16 minutes after the heating begins

D. After approximately 16 minutes of heating



4. In the graph the temperature remains constant from 0 to 6 minutes and again after 16 minutes. During these two time periods, the heat energy was used to do which of the following?

A. To heat the sides of the beaker

B. To remove air molecules from the water

C. To expand the distance between the molecules of water

D. To change the state of matter in the beaker

5. Which of the following is NOT an example of a chemical change?

A. A log burning

B. A nail rusting

C. An ice cube melting

D. An apple rotting

6. Elements with chemical characteristics most similar to those of sodium are listed in what part of the periodic table?

A. Immediately to the right of sodium in the same row

B. Immediately to the left of sodium in the same row

C. Above and below sodium in the same column

D. On the far right of the periodic table

7. Which of the following is an example of a physical change?

A. A piece of iron rusts.

B. A piece of paper burns.

C. Some water freezes into ice.

D. Acid from a battery corrodes the surrounding metal.

8. Suppose you have a mixture of salt and sand. Describe a procedure you could use to separate the salt and the sand. (Assume that any materials or equipment you need are available.)

9. The substances shown, each at room temperature, have been classified into groups. On what property is the classification based?

Group A	Group B	Group C
Water vapor	Ice	Alcohol
Oxygen	Aluminum	Water
Air	Iron	Gasoline

A. Chemical composition

B. Specific heat

C. State of matter

D. Abundance within the Earth's crust

10. Two objects of different shapes are each made from 4 cubes stuck together as shown. If all the cubes are exactly alike, how do the two objects compare in weight and volume?

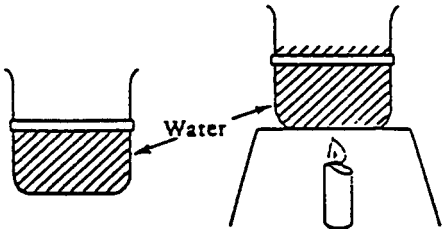
A. Object I weighs more, but both have the same volume.

B. Object II weighs more and has the greater volume.

C. Both weigh the same, but object I has the greater volume.

D. Both weigh the same and have the same volume.

11. A rubber band is put around a beaker to mark the level of water in the beaker. The beaker is then placed above a burning candle. After a few minutes the level of water is above the rubber band. What best explains this?



A. The water molecules have become bigger.

B. The average space between the water molecules has increased.

C. Water molecules from the air have condensed into the beaker.

D. Many of the water molecules have split, making new gases.

12. Imagine that you could put popcorn kernels into an airtight popcorn popper and measure the mass of the popper with the kernels. After the popcorn has popped, the mass of the popper and the popcorn will be

A. less than the original mass because popped corn is less dense than the kernels are

B. equal to the original mass because the container is airtight

C. greater than the original mass because the volume of the popped corn is greater than that of the kernels

D. impossible to determine accurately without weighing each piece of popcorn immediately

13. Which of the following energy sources is the best example of a nonrenewable resource?

A. Coal
B. Wind
C. Water
D. Sunlight

14. What property of water is most important for living organisms?

A. It is odorless.
B. It does not conduct electricity.
C. It is tasteless.
D. It is liquid at most temperatures on Earth.

15. For each of the sources of electrical energy listed below, describe an advantage and a disadvantage of relying on that energy source for a large part of our country's electrical energy.

Solar

Advantage:

Disadvantage:

Nuclear

Advantage:

Disadvantage:

Hydroelectric

Advantage:

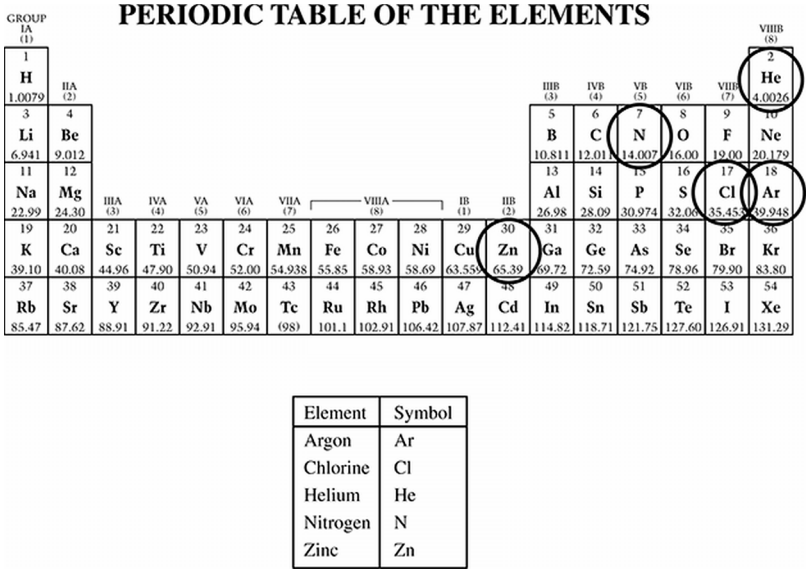
Disadvantage:

Fossil Fuels (coal and oil)

Advantage:

Disadvantage:

16.



Element	Symbol
Argon	Ar
Chlorine	Cl
Helium	He
Nitrogen	N
Zinc	Zn

Based on its location on the partial periodic table shown above, which element would you predict has chemical properties that are most similar to argon (Ar)?

A. Chlorine (Cl) B. Helium (He) C. Nitrogen (N) D. Zinc (Zn)

17. Which is an example of a chemical reaction?

A. The melting of ice

B. The grinding of salt crystals to powder

C. The burning of wood

D. The evaporation of water from a puddle

18. Animals are made up of many atoms. What happens to the atoms after an animal has died?

A. The atoms stop moving.

B. The atoms recycle back into the environment

C. The atoms split into simpler parts and then combine to form other atoms.

D. The atoms no longer exist once the animal has decomposed.

19. Which of the following is *not* a mixture?

A. Air B. Blood C. Orange juice D. Salt

20. Which is a chemical change?

A. Element 1 is hammered into a thin sheet.

B. Element 2 is heated and turns into a liquid.

C. Element 3 turns a greenish color as it sits in air.

D. Element 4 is ground up into a fine, slippery powder.

21. Most of the chemical energy released when gasoline burns in a car engine is not used to move the car, but is changed into

A. electricity B. heat C. magnetism D. sound

22. Which object listed in the table has the greatest density?

Object	Mass of Object	Volume of Object
W	11.0 grams	24 cubic centimeters
X	11.0 grams	12 cubic centimeters
Y	5.5 grams	4 cubic centimeters
Z	5.5 grams	11 cubic centimeters

A. W B. X C. Y D. Z

23. Which is an example of a chemical reaction?

A. Water boiling B. Sugar dissolving C. Nails rusting D. Wax melting

24. Which is a chemical change?

A. Element 1 is polished to form a smooth surface.

B. Element 2 is heated and evaporates.

C. Element 3 develops a white, powdery surface after standing in air.

D. Element 4 is separated from a mixture by filtration.

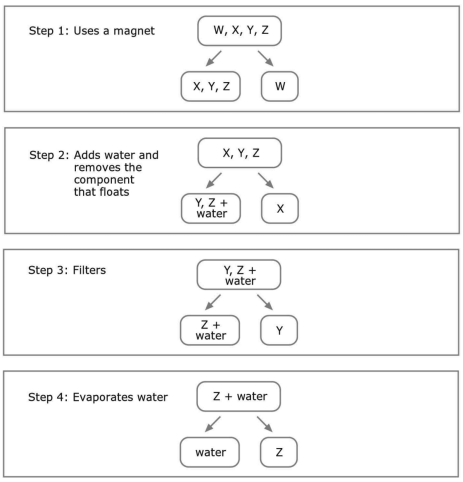
25. Which of the following is NOT a mixture?

A. Smoke B. Sugar C. Milk D. Paint

26. Oxygen, hydrogen, and water are substances.
Which of these substances are elements?

A. oxygen, hydrogen and water
B. oxygen and hydrogen only
C. oxygen only
D. water only

27. Teresa is given a mixture of salt, sand, iron filings, and small pieces of cork. She separates the mixture using a 4-step procedure as shown in the diagram. The letters W, X, Y, and Z are used to stand for the four components but do not indicate which letter stands for which component.



Identify what each component is by writing *salt*, *sand*, *iron*, or *cork* in the correct spaces below.

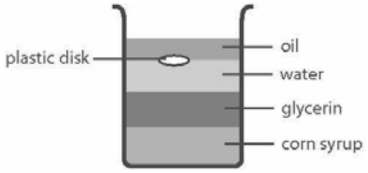
Component W is: _____

Component X is: _____

Component Y is: _____

Component Z is: _____

28. Abiodiu poured corn syrup into the bottom of an empty beaker. He carefully added a layer of glycerin, water, and oil, as shown in the diagram. He then dropped a plastic disk into the beaker.



Which statement is true?

A. Oil is more dense than corn syrup.

B. Plastic is less dense than oil.

C. Glycerin is more dense than oil.

D. Corn syrup is less dense than water.

EOG review matter Smith 05/05/2015

1.
Answer: C

2.
Answer: A

3.
Answer: D

4.
Answer: D

5.
Answer: C

6.
Answer: C

7.
Answer: C

8.
Answer: [procedure]

9.
Answer: C

10.
Answer: D

11.
Answer: B

12.
Answer: B

13.
Answer: A

14.
Answer: D

15.
Answer:

16.
Answer: B

17.
Answer: C

18.
Answer: B

19.
Answer: D

20.
Answer: C

21.
Answer: B

22.
Answer: C

23.
Answer: C

24.
Answer: C

25.
Answer: B

26.
Answer: B

27.
Answer: W = iron; X = cork; Y = sand; Z = salt

28.
Answer: C