



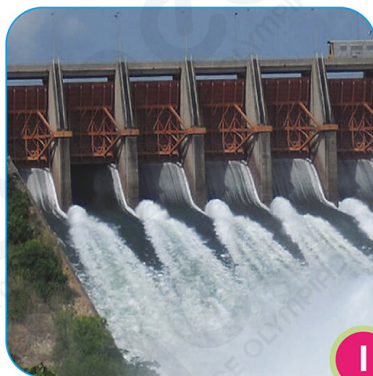
Huge greenhouses for micro algae production have been set up in Monteverdi Marittimo, Italy's oldest geothermal region. This micro algae, which is a source of protein and Omega 3, is considered as one of the future foods.

How many of the following information about green micro-algae are correct?

- I. They live in the sea or fresh water.
- II. They are single celled organisms.
- III. They belong to the group of flowering plants.
- IV. They use carbon dioxide and produce oxygen.
- V. It is a rich source of food for fish.
- VI. It is used in the pharmaceutical and cosmetic industry.

A) 6
C) 4

B) 5
D) 3



I
Hydroelectric energy



II
Solar energy



III
Jeothermal energy



IV
Wind energy

Which one of below given energy sources are renewable energy source?

- A) I, III
- C) II, III, IV

- B) I, II, IV
- D) I, II, III, IV

Some energy resources are listed below.

coal oil wind wood uranium

Which two energy resources are fossil fuels?

- A) wind, wood
- B) wind, oil
- C) uranium, wood
- D) coal, oil

This is the label from a bar chocolate.

	Per 100g	Per Bar (45g)
Energy	2210 kJ 530 kcal	995 kJ 240 kcal
Fat	30.5g	13.5g
Saturated fats	18.5g	8.3g
Carbohydrate	56.5g	25.5g
of which Sugars	56g	25.0g
Fibre	0.7g	0.3g
Protein	7.5g	3.4g
Salt	0.23g	0.10g

How much energy would your body get if you ate all chocolate?

- A) 530 kcal
- B) 2210 kJ
- C) 995 kcal
- D) 240 kcal

John has a wind-up radio.

It does not use batteries. It is powered by a steel spring.

John winds up the spring.

As the spring unwinds, potential energy in the spring is transferred to a generator, which then turns.

The generator provides electrical energy for the radio.

Fill the gaps in the sentences below to show the useful energy changes which take place in the generator and the speaker.

(i) As the generator turns, ----- energy is changed to electrical energy.

(ii) In the speaker, electrical energy is changed to ----- energy.

A) i - sound, ii - sound

B) i - kinetic, ii - electric

C) i - electric, ii - wind

D) i - kinetic, ii - sound

Sharon is riding her horse. She is wearing a riding hat



- I. Give the name of two organs the riding hat protects.
- II. Give one fact about horses that shows they are mammals.

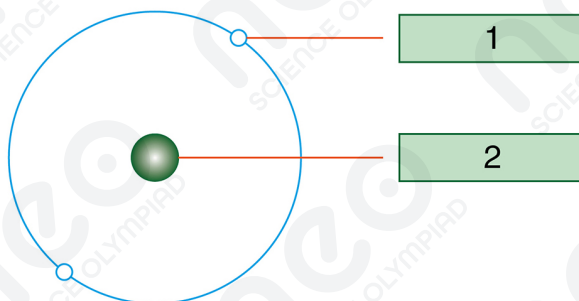
	I	II
A)	Skull, brain	They have fur
B)	Mouth, skin	They have muscles
C)	Skull, ribs	They have tail
D)	Chest, lungs	They have hair

A catalytic converter helps reduce air pollution and acid rain.

Where in a car will you find a catalytic converter?

- A) exhaust system
- B) fuel tank
- C) air filter
- D) oil filter

The diagram below represents an atom of helium.



Name the two parts shown.

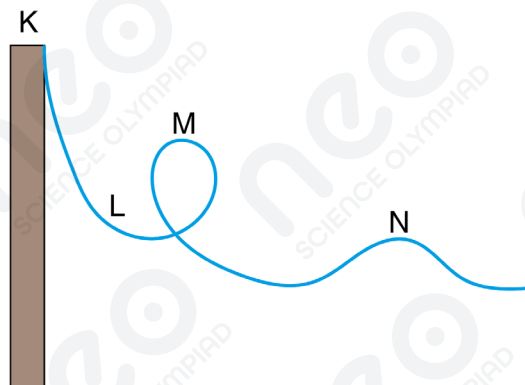
- A) 1 - proton, 2 - electron
- B) 1 - atom, 2 - electron
- C) 1 - electron, 2 - shell
- D) 1 - electron, 2 - nucleus

What is the source of energy in a hydroelectric power station?

- A) Coal
- B) Gravitational potential energy of water behind the dam
- C) Hot rocks and magma underground
- D) Kinetic energy of the water behind the dam

A student makes a track for marbles to roll down. He lets the marble go from point K

At which point, K, L, M, or N, does the marble have the least gravitational potential energy?



- A) K
- B) L
- C) M
- D) N

Annelid is an invertebrate animal. Annelid is also called segmented worm and it is shown below.



Which of the following is not an example of annelids?

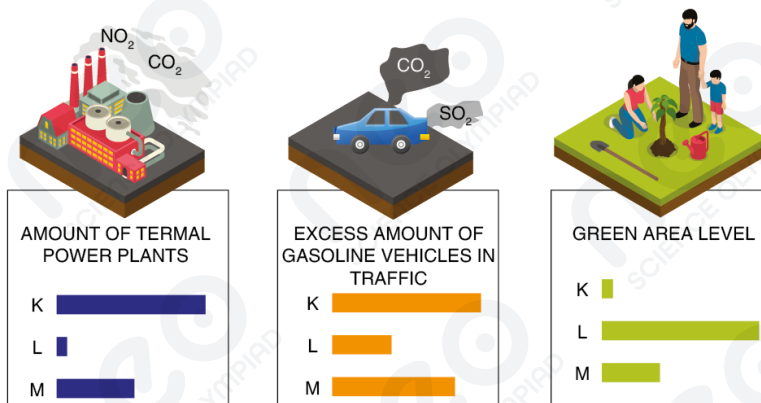
- A) Leeches
- B) Earthworms
- C) Snakes
- D) Sandworms

Why does a metal spoon feel colder than a wooden spoon at room temperature?

- A) The metal radiates more infra – red radiation than the wood
- B) The metal is a better thermal conductor than the wood
- C) The metal has a higher melting point than the wood
- D) The metal has a lower thermal capacity than the wood

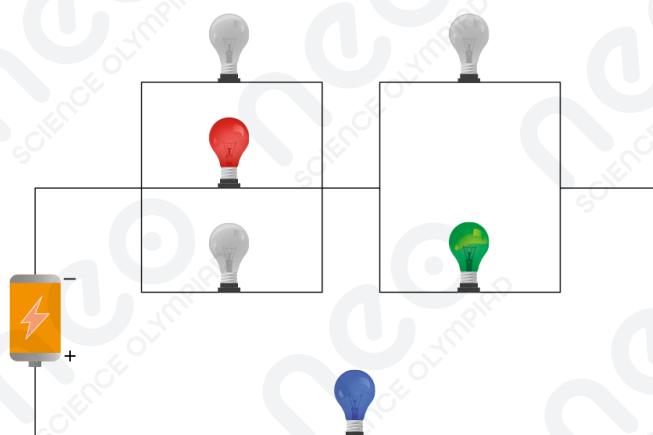
Acid rains are defined as precipitation with a pH value of less than 5.6, caused by the use of fossil fuels.

Below is some information about the UK's K, L and M cities.



Accordingly, which of the following comments is wrong?

- A) The fastest and most effective way to combat acid rain in K city is to plant trees.
- B) The use of electric vehicles in transportation reduces acid rain.
- C) Historical buildings made of marble in cities K and M are in danger of erosion.
- D) The expected pH of the rain city M is higher than that of city K and lower than that of city L.

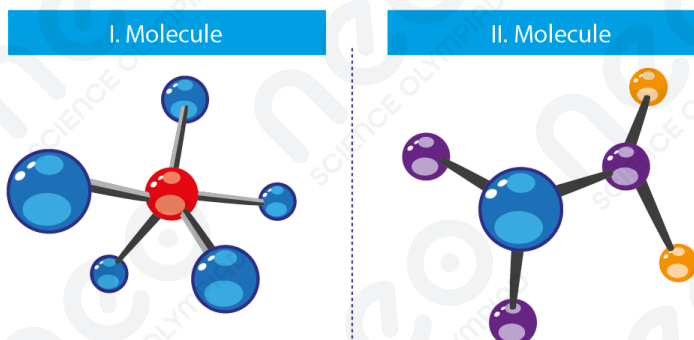


Above is an electrical circuit made of three identical transparent and three colored bulbs. All the active bulbs are in good condition and burning.

Accordingly, which of the following information is correct?

- I. If the green light bulb burns out, no light bulb will light up.
- II. If the blue light bulb burns out, no light bulb will light up.
- III. If the red light bulb explodes or is disassembled, all of the transparent light bulbs glow with the same brightness.
- IV. The relationship between the brightness of the colored bulbs (from high to low) is blue-green-red.

- A) II and III
- B) I and IV
- C) II, III and IV
- D) I, II, III and IV



In the above molecular models, all the spheres are the same size and each colored sphere shows a different atom.

Which of the following tables about these molecules could be correct?

A)

molecule	atomic type	number of atoms
I	6	6
II	3	5

B)

molecule	atomic type	number of atoms
I	2	6
II	3	6

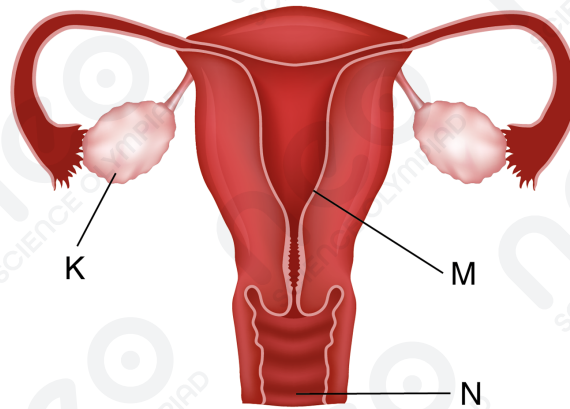
C)

molecule	atomic type	number of atoms
I	2	5
II	2	6

D)

molecule	atomic type	number of atoms
I	1	6
II	1	6

The diagram shows the female reproductive system.



Eggs are produced in the.....

K – is ovaries

M – is uterus

N – is vagina

A) uterus

B) vagina

C) fallopian tube

D) ovaries

Why do stainless steel pots often have plastic handles?

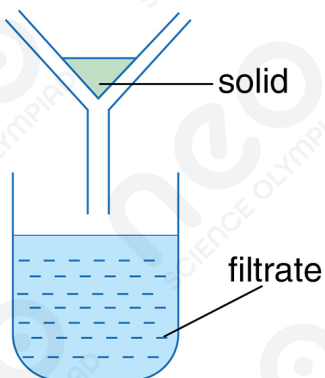


- A) It is not possible to make handles out of plastic.
 - B) Plastic is good thermal insulator.
 - C) Plastic is a good thermal conductor.
 - D) Plastic is a good electrical insulator.
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The differences in characteristics between individuals in a population is called.....

- A) Adaptation
 - B) Variation
 - C) Environmental cause
 - D) Reproduction
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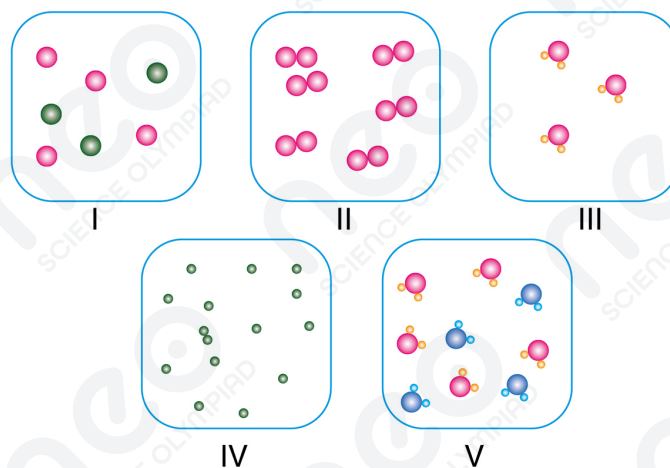
Copper carbonate, an insoluble solid, is mixed with sodium chloride, a soluble solid. The mixture is added to water, stirred and then filtered.



What substance is left on the filter paper?

- A) Copper carbonate
- B) Sodium chloride
- C) Water
- D) Copper chloride

In the diagram below, each circle represents one atom. Circles with the same shading are atoms of the same element. Circles with different shading are atoms of different elements.



Which of the following is a mixture of elements and a mixture of compounds?

	Mixture of element	Mixture of compound
A)	I, III	IV, V
B)	III	IV
C)	II, III	I, IV, V
D)	I	V