

## Mock Exam 2

**Choose the best answer:**

(\_\_\_ / 28)

1. How is electricity formed?
  - A- Transfer of protons
  - B- Transfer of atoms
  - C- Transfer of electrons
  - D- Transfer of neutrons
  
2. Which of the following would be the best material to use for making tea kettles?
  - A- graphite, specific heat 710
  - B- iron, specific heat 450
  - C- copper, specific heat 380
  - D- aluminum, specific heat 920
  
3. The location of the strongest magnetic forces is the \_\_\_\_\_.
  - A- Electromagnets
  - B- magnetic domains
  - C- magnetic fields
  - D- magnetic poles
  
4. Endothermic reactions are reactions that:
  - A- absorb heat
  - B- release heat
  - C- do not involve heat
  - D- take place instantaneously

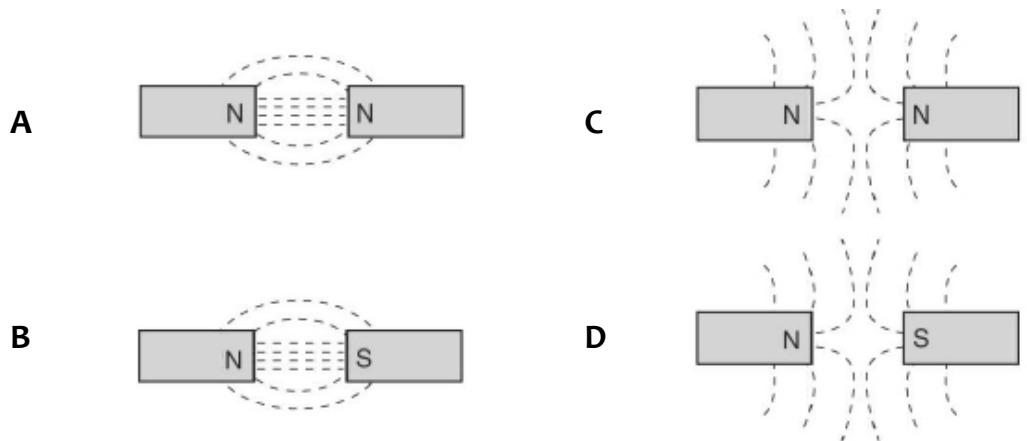
5. An ionic bond is the attraction between\_\_\_\_\_

- A- similarly charged ions
- B- oppositely charged ions
- C- neutral ions
- D- neutral atoms

6. A balloon is placed in a cold room. What process takes place inside the balloon?

- A- Thermal contraction
- B- Thermal conduction
- C- Thermal radiation
- D- Thermal expansion

7. Which combination of magnetic field lines and poles shows two magnets repelling each other?



8. The function of an electric motor is to change \_\_\_\_.

- A- chemical energy to electrical energy
- B- electrical energy to chemical energy
- C- electrical energy to mechanical energy
- D- mechanical energy to electrical energy

9. Chemical equations must be balanced to satisfy the \_\_\_\_.

- A- law of definite proportions
- B- law of multiple proportions
- C- law of conservation of mass
- D- principle of Avogadro

**10.**What is a double bond?

- A-** a bond between two atoms
- B-** one pair of electrons shared between two atoms
- C-** two pairs of electrons shared between two atoms
- D-** two pairs of electrons shared between four atoms

**11.** What factor accounts for the fact that powdered sugar dissolves more quickly than granulated sugar under the same conditions?

- A-** temperature
- B-** concentration
- C-** nature of reactants
- D-** surface area

**12.**What are the two types of current?

- A-** Fast and slow current
- B-** Alternating and Direct current
- C-** Proton and electron current

**13.** Which of the following is NOT found on the periodic table?

- A-** the atomic number of each element
- B-** the symbol of each element
- C-** the density of each element
- D-** the atomic mass of each element

**14.**A bimetallic coil is made from how many types of coils?

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

**Distinguish** between the terms in each of the following pairs

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1. Ionic bond, covalent bond

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2. parallel circuit, series circuit

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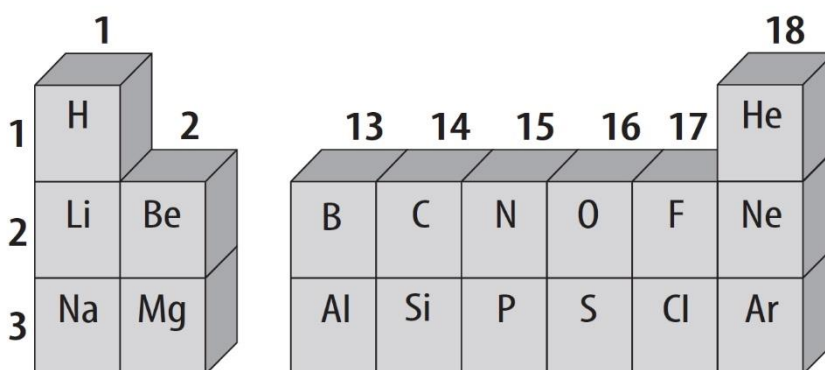
3. temperature, thermal energy

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**Directions:** This diagram shows the first 18 elements of the periodic table. Use the diagram to answer each question.

( \_\_\_ / 10)



4. How many valence electrons do atoms of oxygen (F) have?

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5. How many valence electrons do atoms of sulfur (P) have?

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6. How many chemical bonds can an atom of carbon (Mg) form?

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7. How many chemical bonds can an atom of carbon (Na) form?

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8. How many chemical bonds can an atom of carbon (S) form?

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