

Name: _____

Date: _____

Complete the passage by filling in the blank with the most appropriate sentence.

1. Magnetism is the class of physical attributes that occur through a magnetic field, which allows objects to attract or repel each other. Because both electric currents and the magnetic moments of elementary particles give rise to magnetic fields, magnetism is one of two aspects of electromagnetism. The familiar effects occur in ferromagnetic materials, which are strongly attracted by magnetic fields and can be magnetized to become permanent magnets, producing fields themselves. Only a few substances are ferromagnetic; the most common are iron, cobalt, nickel, and their alloys. --- Ferromagnetism is responsible for most of the effects encountered in everyday life, but there are actually several types of magnetism. Paramagnetic substances are weakly attracted to an applied magnetic field, whereas diamagnetic substances are weakly repelled.

- A)** Magnetic fields are also important in technologies such as motors, generators, data storage, and medical imaging systems.
- B)** These laboratory instruments reveal why the substances discussed above must be treated as entirely non-magnetic under ordinary conditions.
- C)** All substances exhibit some type of magnetism, and magnetic materials are classified according to their bulk susceptibility.
- D)** Ferromagnetism is a universal property shared equally by every substance, regardless of its composition, temperature, or electronic structure.
- E)** The ancient discovery of lodestones eventually encouraged systematic studies of navigation, electricity, and the historical development of magnetic theory.

2. Nutrition is the biochemical and physiological process by which an organism uses food and water to support its life. The intake of these substances provides organisms with nutrients, divided into macro- and micronutrients, which can be metabolized to create energy and chemical structures; too much or too little of an essential nutrient can cause malnutrition. The type of organism determines what nutrients it needs and how it obtains them. Organisms obtain nutrients by consuming organic matter, consuming inorganic matter, absorbing light, or some combination of these. All forms of life require carbon, energy, and water as well as various other molecules. --- Humans have developed agriculture and cooking to replace foraging and advance human nutrition. Plants acquire nutrients through the soil and atmosphere, while fungi absorb nutrients around them through the mycelium.

- A)** Agricultural production and cooking later changed human diets by replacing many earlier forms of foraging and food acquisition.
- B)** These clinical recommendations also specify how each organism should obtain all essential nutrients from its surrounding environment.
- C)** Every organism obtains the same nutrients through an identical process, because biological differences do not influence nutritional requirements.
- D)** Animals require complex nutrients such as carbohydrates, lipids, and proteins, obtaining them by consuming other organisms.
- E)** Nutritional science became a formal research field only after laboratories developed reliable methods for identifying individual micronutrients.