

## Multiple Choice (16 marks)

1. Gavin has two rocks. Both rocks are made up entirely of the same mineral. What other property of his two rocks is most likely to be the same?
  - (a) size
  - (b) shape
  - (c) color
  - (d) weight
2. Which is an example of a human-made product?
  - (a) cake
  - (b) tomato
  - (c) wheat
  - (d) coal
3. Sulfur (S), oxygen (O<sub>2</sub>), water (H<sub>2</sub>O), and sodium chloride (NaCl) are all examples of pure substances. Which of the following describes all pure substances?
  - (a) A pure substance consists of only one type of element.
  - (b) A pure substance has a definite chemical composition.
  - (c) A pure substance cannot be broken down into simpler substances.
  - (d) A pure substance is normally found as a solid at room temperature.
4. The speed of a sound wave varies as it travels through different substances. Which factor will most affect the speed of a sound wave?
  - (a) the frequency of the wave
  - (b) the wavelength of the wave
  - (c) the source that created the sound
  - (d) the distance between molecules in the medium
5. A lizard species mostly eats fruit from one particular type of tree. If a virus kills most these trees, which individual lizards will most likely survive?
  - (a) lizards that can climb higher in the fruit trees
  - (b) lizards that have darker coloration
  - (c) lizards that can find other types of food
  - (d) lizards that produce more offspring

6. Anya placed an ice cube on the sidewalk on a warm day. The ice cube soon melted to form a puddle. What process caused the ice cube to melt?
- (a) Heat transferred through the ice cube by convection.
  - (b) Heat transferred from the air to the ice cube by radiation.
  - (c) Heat transferred from the air and the pavement by conduction.
  - (d) Heat transferred through the ice cube into the pavement by conduction.
7. A student accidentally drops a test tube that breaks when it hits the floor. Which method is the best way to retrieve the broken glass?
- (a) pick up the pieces with a paper towel
  - (b) use a chemical spill kit
  - (c) use a dustpan and broom
  - (d) pick up the pieces by hand
8. Which of these is not part of an atom?
- (a) proton
  - (b) isotope
  - (c) nucleus
  - (d) electron

## True / False (24 marks)

*Answer True or False and justify briefly.*

1. True or False: The correct answer to 'A wind farm contains a large number of windmills to generate electricity. Which is the BEST reason wind farms are not located near forests?' is 'Forest animals would destroy the windmills.'
2. True or False: The correct answer to 'An object is attracted to a magnet. When the magnet is moved away from the object, the magnetic force on the object will' is 'remain the same'.
3. True or False: The correct answer to 'Forests have been cut and burned so that the land can be used to raise crops. Which consequence does this activity have on the atmosphere...' is 'It reduces the production of oxygen.'
4. True or False: The correct answer to 'The temperature at which water freezes enables water to exist in which two forms on Earth?' is 'liquid oceans and solid glaciers'.
5. True or False: The correct answer to 'How are sedimentary rocks made?' is 'Chemical reactions change minerals.'

6. True or False: The correct answer to 'Puddles on a sidewalk are evaporating quickly. What most likely causes the puddles to evaporate?' is 'heat'.
7. True or False: The correct answer to 'Robert put two drops of an indicator into vinegar, and the color turned red. He then added drops of ammonia solution until the color...' is 'rusting'.
8. True or False: The correct answer to 'Flooding rivers can help or harm the environment. Which of these would be a helpful effect from a flood?' is 'less habitat for aquatic animals'.
9. True or False: The correct answer to 'When prehistoric animals died and their soft parts decayed, which product was formed?' is 'oil'.
10. True or False: The correct answer to 'Which adaptation helps a worm move in soil?' is 'skin that breathes'.
11. True or False: The correct answer to 'A goat gets energy from the grass it eats. Where does the grass get its energy?' is 'water'.
12. True or False: The correct answer to 'A 72 W navigation unit on a commercial aircraft has a 24 V power supply and uses 3 A of electric current. What is the electrical...' is '8 ohms'.

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