Automotive Technology 7th Edition
Chapter 60: Heating and Air-Conditioning Principles
Short Answer Quiz

Name: _____ Date: _____

1. Describe the primary purpose of the heating, ventilation, and air-conditioning (HVAC) system in an automobile.

_____
_____
_____
_____

2. Explain the relationship between protons, electrons, and the atomic number of an element. Provide an example using hydrogen and oxygen.

_____
_____
_____
_____

3. Differentiate between the three states of matter and describe the conditions under which water exists in each state.

_____
_____
_____
_____

4. Distinguish between heat and temperature. How are they measured, and what units are commonly used?

_____
_____
_____
_____

5. Describe the three primary methods by which heat can be transferred. Provide an example of each.

_____
_____
_____
_____

Automotive Technology 7th Edition
Chapter 60: Heating and Air-Conditioning Principles
Short Answer Quiz

Name: _____ Date: _____

6. Explain the role of refrigerant in the air-conditioning process and how it changes states to facilitate cooling.

_____
_____
_____
_____

7. State the fundamental principle regarding the direction in which heat flows. Why is this principle important in understanding HVAC systems?

_____
_____
_____
_____

8. How does the color and texture of a surface affect its ability to emit or collect radiant heat? Provide an example related to vehicle colors.

_____
_____
_____
_____

9. Describe the conditions under which a substance changes from a solid to a liquid and from a liquid to a gas. How does adding or removing heat influence these changes?

_____
_____
_____
_____

10. Based on the document, what is the preferred temperature and relative humidity range for humans?

_____
_____
_____
_____