

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.

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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?