

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

Name: _____ Date: _____

Matching: Choose the item in column 2 that best matches each item in column 1.

- | | | |
|--|---|-----------|
| 1. Primary purpose of a vehicle's HVAC system | A. The range of temperature and humidity conditions that most people find comfortable. | 1. _____ |
| 2. Definition of Heat | B. Heat energy that is absorbed or released when a substance changes its state (e.g., from liquid to gas) without changing its temperature. | 2. _____ |
| 3. Measurement of average molecular kinetic energy | C. Heat transfer through the movement of fluids (liquids or gases). | 3. _____ |
| 4. Unit measuring heat to raise 1 lb of water 1°F | D. The transfer of energy from one object to another due to a temperature difference. | 4. _____ |
| 5. Heat absorbed/released during a state change without temperature change | E. The amount of heat required to raise the temperature of 1 pound (0.45 kg) of water 1°F (0.56°C). | 5. _____ |
| 6. Heat transfer by direct contact | F. A fluid that continuously changes state from liquid to gas and back to liquid in an air-conditioning system to move heat. | 6. _____ |
| 7. Heat transfer by fluid movement | G. To provide comfort for the driver and passengers by maintaining a comfortable interior environment. | 7. _____ |
| 8. Heat transfer via electromagnetic waves | H. Heat transfer through electromagnetic waves, without direct contact or a medium. | 8. _____ |
| 9. Fluid changing state to move heat in A/C systems | I. Heat transfer that occurs directly between objects in contact. | 9. _____ |
| 10. Ideal temperature and humidity range for human comfort | J. A measure of the average kinetic energy of the molecules in a substance. | 10. _____ |

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Answer Key

Answer Key:

1. G
2. D
3. J
4. E
5. B
6. I
7. C
8. H
9. F
10. A