

Automotive Heating and Air Conditioning, 9th Edition

Quiz 9B

NAME _____

1. When checking a heater for a no-heat concern, both hoses are found to be too hot to hold. What could be the cause of no heat in the vehicle? 1. _____
 - A) Bad thermostat
 - B) Air blend door fault
 - C) Worn water pump belt
 - D) Loose hose clamps

2. What is commonly wrong when the heat from a heater "comes and goes"? 2. _____
 - A) Cooling system is low on coolant
 - B) A coolant restriction
 - C) A worn water pump drive belt
 - D) Incorrect heater hoses

3. Water pumps _____. 3. _____
 - A) only work at idle and low speeds and are disengaged at higher speeds
 - B) use engine oil as a lubricant and coolant
 - C) are driven by the engine crankshaft or camshaft
 - D) disengage during freezing weather to prevent radiator failure

4. If a cooling system operates at too cool of a temperature, the engine will _____. 4. _____
 - A) produce more torque
 - B) have more efficiency
 - C) pre-ignite or detonate
 - D) produce higher emissions

5. Heat transfer is improved from the coolant to the air when the _____. 5. _____
 - A) temperature difference is great
 - B) temperature difference is small
 - C) coolant is 95% antifreeze
 - D) Both A and C

6. What helps prevent water pump cavitation? 6. _____
 - A) Using the specified brand of heater hose
 - B) Using the specified radiator cap
 - C) Using the correct water pump
 - D) Use a higher output water pump

7. A customer complains that the heater works sometimes, but sometimes only cold air comes out while driving. Technician A says that the water pump is defective. Technician B says that the cooling system could be low on coolant. Which technician is correct? 7. _____
 - A) Technician A only
 - B) Technician B only
 - C) Both technicians A and B
 - D) Neither technician A nor B

8. The normal operating temperature (coolant temperature) of an engine equipped with a 195°F thermostat is _____.
- A) 175°F to 195°F
 - B) 185°F to 205°F
 - C) 195°F to 215°F
 - D) 175°F to 215°F
9. Technician A says that cooling fans are designed to draw air through the radiator to aid in the heat transfer process. Technician B says that drawing the heat from the coolant transfers this heat to the outside air through the radiator. Which technician is correct?
- A) Technician A only
 - B) Technician B only
 - C) Both technicians A and B
 - D) Neither technician A nor B
10. The use of a coolant exchange machine is helpful in preventing _____ from entering the cooling system.
- A) air
 - B) oil
 - C) excessive vibrations
 - D) hose residue

Answer Key

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1. B
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2. A
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3. C
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4. D
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5. A
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6. B
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7. B
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8. C
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10. A
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