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Name: *

Date: * / * / * Class Period: *

Commercial Building Energy Systems Assessment Questions

Chapter 2:

xx. What is this?

- a. none of these
- b. diffuser
- c. duct
- d. return air vent



xx. What is this?

- a. none of these
- b. diffuser
- c. duct
- d. return air vent



Chapter 3:

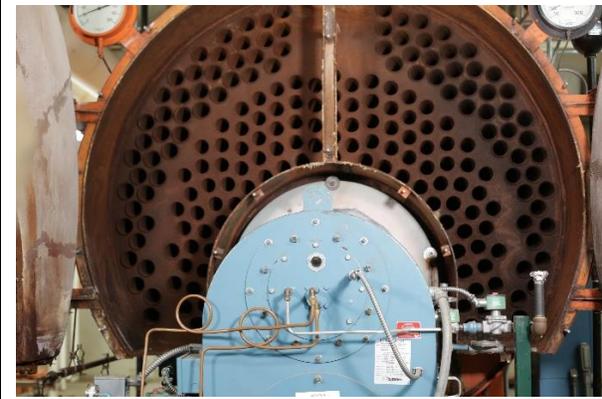
xx. What are these?

- a. air conditioning chillers
- b. air handling units
- c. boilers
- d. variable air volume (VAV) boxes



xx. During the heating season, careful maintenance work is often done on air conditioning systems. During the cooling season, careful maintenance work is often done on heating systems. Which term best describes this cycle of maintenance?

- a. none of these
- b. energy maintenance
- c. first maintenance
- d. preventative maintenance



xx. When any fuel is burned in a combustion reaction, what waste gas is always produced and released?

- a. none of these
- b. carbon dioxide, CO₂
- c. methane, CH₄
- d. ozone, O₃

Combustion of natural gas (methane),
not chemically balanced:



Chapter 4:

<p>xx. What are these?</p>	
<p>a. air conditioning chillers b. air handling units c. boilers d. variable air volume (VAV) boxes</p>	

<p>xx. Which of these is the secondary source of energy?</p>	
<p>a. coal b. electricity c. natural gas d. uranium (to produce nuclear power)</p>	

Chapter 5:

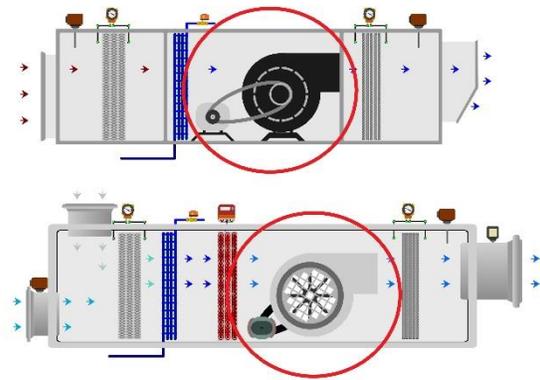
xx. What is this?

- a. air conditioning chiller
- b. air handling unit
- c. boiler
- d. variable air volume (VAV) box



xx. What are these?

- a. none of these
- b. blower fans
- c. filters
- d. heat exchange coils



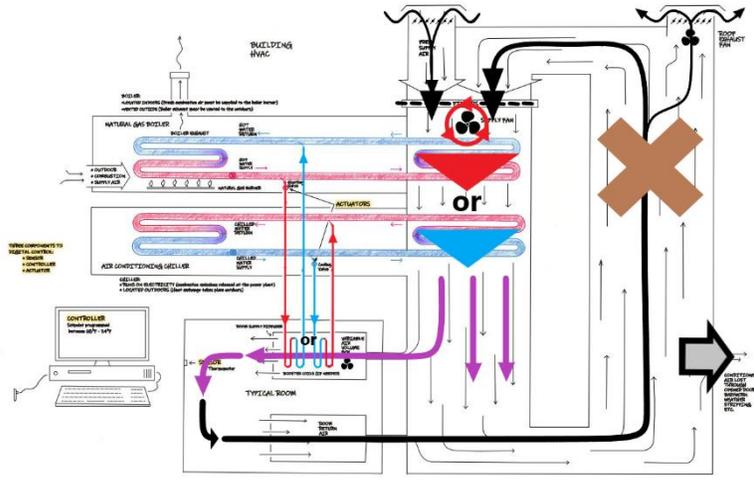
xx. What is this?

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- d. heat exchange coil



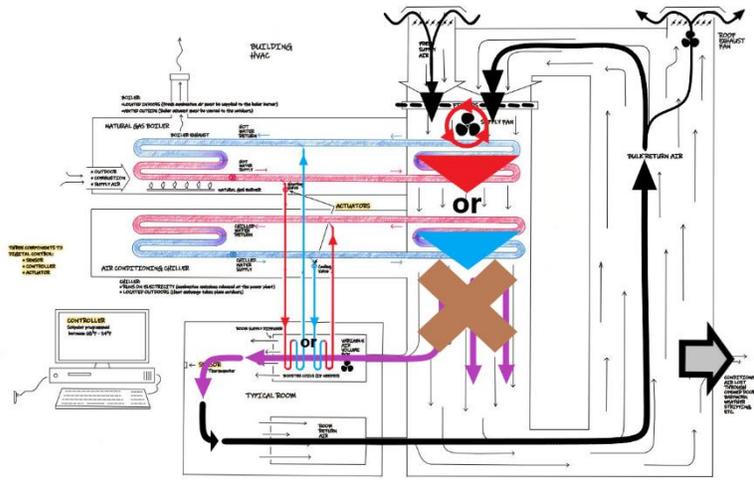
xx. What term best characterizes air at the location with the big, brown X ?

- a. conditioned air
- b. filtered air
- c. return air
- d. supply air



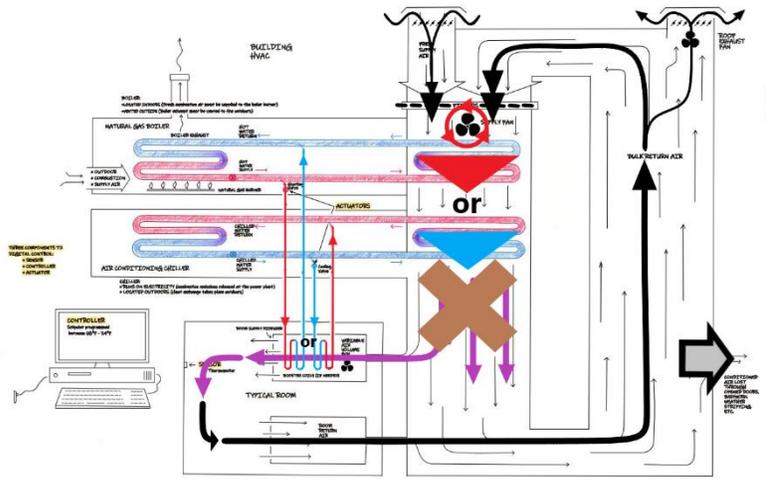
xx. What term best characterizes air at the location with the big, brown X ?

- a. intake air
- b. return air
- c. stale air
- d. supply air



xx. What term best characterizes air at the location with the big, brown X ?

- a. conditioned air
- b. exhaust air
- c. intake air
- d. return air



Chapter 6:

xx. Which of these is the definition for an actuator?

- a. a mechanical device responsible for moving or controlling a mechanism within the equipment.
- b. a device that measures an environmental variable and relays that information in real time to a controller.
- c. a digital processing system that collects data from *sensors*, monitors the data, and relays digital commands to a *actuators* based on its programming.

xx. Which of these is the definition for a controller?

- a. a mechanical device responsible for moving or controlling a mechanism within the equipment.
- b. a device that measures an environmental variable and relays that information in real time to a controller.
- c. a digital processing system that collects data from *sensors*, monitors the data, and relays digital commands to a *actuators* based on its programming.

xx. Which of these is the definition for a sensor?

- a. a mechanical device responsible for moving or controlling a mechanism within the equipment.
- b. a device that measures an environmental variable and relays that information in real time to a controller.
- c. a digital processing system that collects data from *sensors*, monitors the data, and relays digital commands to a *actuators* based on its programming.

xx. What is this?

- a. none of these
- b. actuator
- c. controller
- d. sensor



xx. What is this?

- a. none of these
- b. actuator
- c. controller
- d. sensor



xx. What is this?

- a. none of these
- b. actuator
- c. controller
- d. sensor



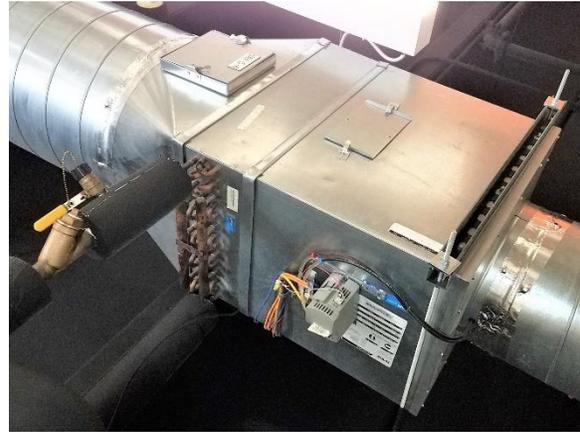
xx. These are the three components of...?

- a. none of these
- b. a variable air volume (VAV) box
- c. an air handling unit
- d. an individual BAS application



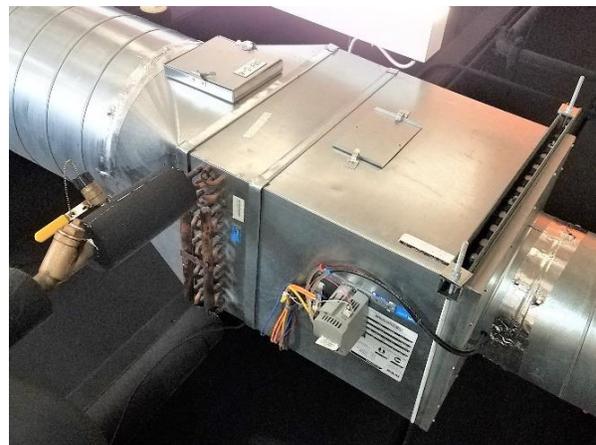
xx. What is this?

- a. air conditioning chiller
- b. air handling unit
- c. boiler
- d. variable air volume (VAV) box

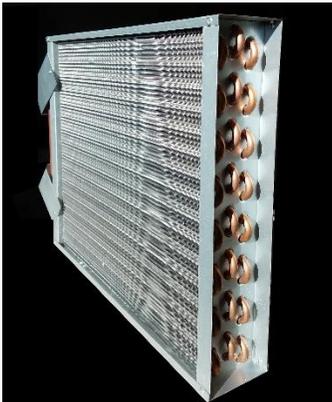


xx. The purpose of the variable air volume (VAV) box is to...?

- a. none of these
- b. circulate refrigerant to the AC chiller
- c. heat the water in the boiler
- d. pre-heat the water going to the boiler



Several Chapters:

<p>xx. What is this?</p>	
<p>a. none of these b. blower fan c. filter d. heat exchange coil</p>	
<p>xx. What are these?</p>	
<p>a. none of these b. diffusers c. ducts d. return air vents</p>	
<p>xx. You're standing next to an air handling unit and safely open a door. Inside you see a heat exchange coil. It has cold water being supplied to it. It has warm water leaving it. This heat exchange coil is which of the following?</p>	
<p>a. none of these b. cooling coil c. fresh air coil d. heating coil</p>	

Chapter 7:

xx. Which of the following are good reasons for considering a career in building energy management?

- a. all of the following
- b. opportunity to make great money
- c. opportunities to think creatively and work in a team
- d. opportunity to make the world a better place



xx. When you save energy, what else do you save?

- a. all of the following
- b. money
- c. energy resources
- d. environmental pollution



xx. Describe the most important idea, concept, principle, or fact you learned while completing this this part of the lesson. Explain why it is important for you (and probably other people) to know and understand.

*** Answer**