

Work Session

1. Explain how a WSHP system accomplishes heat recovery.

2. List the six types of water source heat pumps that are available.

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3. True or False? Water source heat pumps have more problems with moisture control during full-load conditions than with part-load conditions. _____

4. Name the advantages of a WSHP system for each of the four customer types: owners, architects, facility staff, and the utility company.

Owners: _____

Architects: _____

Facility Staff: _____

Utility Company: _____

5. What is the typical WSHP loop temperature range and how is it maintained?

6. An earth-coupled WSHP system often eliminates what typical components from a standard closed-loop WSHP system?

7. What kind of heat rejection unit is normally used in a closed-loop WSHP system and why?

8. What is an alternative to using the heat rejecter type described in question 7 above?

9. What five inputs are required for a WSHP unit selection?

10. Name the three conditions for which the WSHP controls must provide a signal for emergency shutdown.

11. Name 6 objectives of a WSHP control system.

12. Which type of piping configuration utilizes the least amount of land area in an earth coupled WSHP design and why?

13. Explain how an airside economizer can be incorporated into a WSHP system. Define any limitations and explain why.

14. Explain why it is important to install a standby pump for a WSHP system.

15. Explain how a variable flow WSHP system works.

16. Name three common methods of supplying outdoor air preconditioning using heat recovery from the building exhaust on a WSHP ventilation system. Which require the exhaust and ventilation airstreams to be close together?

17. Name four methods of ventilation and delivery design for WSHP systems.

18. Explain the purpose and function of adding a storage tank to a WSHP system.

19. What is the current performance standard for WSHP units in the industry and what standards did it replace?

20. Describe why an electric heater might be used on a WSHP unit and how it works in the system.

21. List the seven components of a WSHP system and a brief description of their function.
