Sample CHD Exam Questions

1. Through coordination with an acoustic engineer, it is discovered that the AHU supply fan produces too much noise to fulfill NC-40 inside office rooms. The HVAC designer needs to use a duct silencer. The BEST position for the duct silencer is

   A. as close to the fan as possible.
   B. upstream of the first supply air device.
   C. downstream of the fan after the first elbow.

   Content Area: 4
   Task: Q
   Level: Application
   Answer: A

2. A steam pressure-reducing station will be installed to reduce saturated steam at 150 psig (1003 kPa gage) to a utilization pressure of 10 psig (69 kPa gage). The energy of the entering steam is 1,196.0 Btu/lb (2781.9 kJ/kg). How much energy is lost per pound of steam passing through the pressure-reducing station?

   A. 0.0 Btu/lb (0 kJ/kg)
   B. 35.4 Btu/lb (82.3 kJ/kg)
   C. 70.8 Btu/lb (164.7 kJ/kg)

   Content Area: 1
   Task: X
   Level: Application
   Answer: A
3. What is the allowable leakage in a piping installation?

A. 0%
B. 0.5%
C. 1%

Content Area: 1
Category: Task: Y
Level: Recall
Answer: A

4. A fan catalog indicates that for standard air at a given speed, the fan static pressure of a SWSI centrifugal fan is 4.80 in water (1194 Pa) and the fan outlet velocity is 2,800 fpm (14.2 m/s). What is the fan total pressure?

A. 4.80 in of water (1194 Pa)
B. 5.29 in of water (1316 Pa)
C. 5.50 in of water (1369 Pa)

Content Area: 2
Task: H
Level: Application
Answer: B
5. Which of the following times is BEST for scheduling a final site review for a new office building?

A. prior to beneficial occupancy  
B. at equipment manufacturer startup  
C. just prior to ceiling installation  

Content Area: 3  
Task: H  
Level: Recall  
Answer: A

6. Which of the following factors should an HVAC designer convey to the electrical designer for a chilled water pump?

A. chilled water flow rate and pump head  
B. voltage, power, and amperes  
C. maximum circuit amps (MCA) and maximum overcurrent protection (MOCP)  

Content Area: 4  
Task: N  
Level: Recall  
Answer: B