

Name: _____

Date: _____

APEX® COMPOUNDING SYSTEM USER TRAINING RECORD

Training Lesson: Pump Calibration

Circle the correct answer.

1. How many pumps does APEX use to compound patient orders?
 - a. 1- A single pump for all ingredients
 - b. 26 pumps- one for each ingredient
 - c. 2- A pump for the macro ingredients and a pump for the micro ingredients

2. What ingredient(s) can be used for Pump Calibration?
 - a. Any universal ingredient on the first three stations
 - b. Sterile Water for Injection
 - c. Dextrose

3. **True or False:** Using any size of Sterile Water for Injection of 1L or greater provides sufficient volume for APEX to perform Pump Calibration during system setup.

4. At a minimum how often does APEX require Pump Calibration to be performed?
 - a. At least once every 2 hours.
 - b. At least once every 12 hours.
 - c. At least once every 24 hours.
 - d. At least once every 36 hours.

5. Select the container types which can be used for Pump Calibration.
 - a. Any B. Braun final container that has a capacity of 2000 mL or greater
 - b. A B. Braun 1000 mL Calibration Container marked "Not for Patient Use"
 - c. A B. Braun 2000 mL Calibration Container marked "Not for Patient Use"
 - d. A and B
 - e. A and C

6. **True or False:** Pump Calibration consists of the following 5 steps: 1) Verifying a Calibration Container is attached and pumping a large volume of Sterile Water into it; 2) Calibrating the macro pump; 3) Confirming the calibration of the macro pump; 4) Calibrating the micro pump; 5) Confirming the calibration of the micro pump.

7. **True or False:** During Pump Calibration, APEX compares its two measurements of the weight of Sterile Water it pumps on each of the macro and micro pumps to ensure they meet system specifications for pumping accuracy.

8. What message will you see when APEX completes all steps of Pump Calibration successfully?
 - a. Pump Calibration Successful!
 - b. Result: Successful
 - c. Good Job!
 - d. Calibration Successful

9. When will APEX require the user to perform Pump Calibration outside of initial setup?
 - a. Whenever it wants
 - b. When the volume pumped on the macro side exceeds 50 L, and APEX has not been able to perform an in-process calibration while pumping patient orders.
 - c. When the volume pumped on the micro side exceeds 5 L, and APEX has not been able to perform an in-process calibration while pumping patient orders.
 - d. B & C

10. **True or False:** When the required Pump Calibration volume frequency is met during normal operation, APEX will re-calibrate the pump during compounding (in-process) using orders containing sufficient Sterile Water to effectively measure the weight based upon volume dispensed.

11. When will APEX display an alert to the user of the need to calibrate the pump prior to compounding the next order?
 - a. At least once every 4 hours
 - b. According to the frequency determined during system configuration
 - c. If insufficient orders are filled to allow for in-process calibration and either 50 L of fluid has been pumped through the macro side and/or 5 L of fluid has been pumped through the micro side since the last Pump Calibration.

12. **True or False:** If a user bumps APEX's Load Cell during Pump Calibration, it definitely will not impact whether APEX is able to successfully complete Pump Calibration.