

## PROFICIENCY TEST 1 Basic IV Problems

Name: \_\_\_\_\_

There are 14 questions related to IV and IVPB and enteral feeding calculations. Answers are given in Appendix A. Round to the nearest whole number.

- Order: 1000 mL D5NS; run 150 mL/hour IV  
Supply: IV bag of 1000 mL D5NS  
  - Approximately how many hours will the IV run?  $\frac{150 \text{ mL}}{60} \times 10 = 25$
  - Which tubing will you choose—macro drip (10 gtt/mL) or microdrip (60 gtt/mL)? *6.6 hours*
  - What will be the drip rate? *25 gtt/min*
- Order: 100 mL LR 12 NOON–6 PM IV  
  - What size tubing will you use? *micro*
  - What are the drops per minute? *17 gtt/min*  $\frac{100 \text{ mL}}{360 \text{ min}} \times 60 = 16.6$
- Order: 150 mL NS IV over 3 hours  
Supply: bag of 250 mL NS for IV and macro tubing, 15 gtt/mL; micro tubing, 60 gtt/mL  
  - What would you do to obtain 150 mL NS? *remove 100 mL from bag*
  - What IV tubing would you use? *microdrip*
  - What are the drops per minute? *50 gtt/min*  $\frac{150 \text{ mL}}{180 \text{ min}} \times 60$
- Order: 500 mL D5W IV KVO. Solve for 24 hours. An infusion pump is available. What should be the setting on the infusion pump? *21 mL/hour*
- Order: Vibramycin (doxycycline) 100 mg IVPB every day  
Supply: 100 mg powder  
Package directions: 250 mL/D5W to infuse over 1 hour; macrodrip tubing 10 gtt/mL  
  - State the amount and type of IV fluid you will use and the time for infusion you will use.
  - What are the drops per minute? *42 gtt/min* *250 mL D5W over 60 min*
- Order: aminophylline 500 mg in 250 mL D5W to run 8 hours IV  
Available: vial of aminophylline labeled 1 g in 10 mL; microdrip tubing  
  - How much aminophylline is needed? *5 mL*  $\frac{500 \text{ mg}}{1000 \text{ mg}} \frac{10 \text{ mL}}{1 \text{ g}}$
  - What is the drip rate? *31 gtt/min*
- A patient/client is receiving a primary IV at the rate of 125 mL/hour. The doctor orders Mefoxin (cefoxitin) 1 g in 75 mL D5W q6h to run over 1 hour. Calculate the 24-hour parenteral intake. *2800 mL*
- Order: 1000 mL D5 ½ NS to run at 90 mL/hour; infusion pump available  
  - What will be the pump setting? *90 mL/hour*
  - Approximately how long will the IV run? *11 hours*
- A doctor orders 500 mL aminophylline 0.5 g to infuse at 50 mL/hour. How many milligrams will the patient/client receive each hour? *50 mg*
- Order: Bactrim (trimethoprim and sulfamethoxazole) 5 mL IVPB q6h  
Supply: vial of 5 mL; one 5-mL vial per 75 mL D5W run over 60 to 90 minutes.  
The main IV line is connected to an infusion pump. What will you do? Refer to Figure 6-5.  
  - State the type and amount of IV fluid you would use and the time for infusion.
  - How would you program the infusion pump? *75 mL/hour* *75 mL D5W* *60 minutes*

(continued)

**PROFICIENCY TEST 1 Basic IV Problems (Continued)**

11. Prepare  $\frac{3}{4}$  strength Isocal. Total volume is 150 mL. How much Isocal is to be mixed with how much water? **37.5 mL**
12. Prepare  $\frac{1}{2}$  strength Vivonex. Total volume is 500 mL. How much Vivonex is to be mixed with how much water? **250 mL**
13. Prepare 25% Osmolite. Total volume is 400 mL. How much Osmolite is to be mixed with how much water? **300 mL**
14. Prepare full strength Isocal. Total volume is 500 mL. How much Isocal is to be mixed with how much water? **500 mL Isocal . No Water**

$$d \cdot d = d \times \frac{100 \text{ mL}}{300 \text{ mL}}$$

$$\frac{3}{4} \times 150 = 112.5$$

$$150 - 112.5 = 37.5$$

$$.25 \times 400 = 100$$

$$400 - 100 = 300$$