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AHII Dosage Cal
Exam #1 Practice Q's
1-17-2023

Chpt 4: Proficiency Test

1. $\frac{20\ mEq}{30\ mEq} \times 15mL$

$= 0.666 \times 15mL = \boxed{10mL}$

30 mL – 2 TBSP
25 mL –
20 mL –
15 mL – 1 TBSP
10 mL –
5 mL – 1 tsp

2. $\frac{150\ mg}{75\ mg} \times 7.5mL$

$2 \times 7.5mL = \boxed{15mL}$

30 mL
25 mL
20 mL
15 mL
10 mL
5 mL

3. $\frac{0.125\ mg}{0.25\ mg} \times 10mL$

$0.5 \times 10mL = \boxed{5mL}$

30 mL
25 mL
20 mL
15 mL
10 mL
5 mL

4. $\frac{375\ mg}{125\ mg} \times 5mL$

$3 \times 5mL = \boxed{15mL}$

30 mL
25 mL
20 mL
15 mL
10 mL
5 mL

5. $\frac{40\ mg}{20\ mg} \times 2.5mL$

$2 \times 2.5mL = \boxed{5mL}$

30 mL
25 mL
20 mL
15 mL
10 mL
5 mL

6. $\frac{0.5mg}{0.25mg} = \boxed{2mg}$

7. $\frac{100mcg}{0.1mg}$ 0.100

$\frac{100mcg}{100mg} = \boxed{1mcg}$

8. $\frac{250mg}{100mg} = \boxed{2.5mg}$

9. $\frac{0.5g}{250mg}$ 0.500 $\frac{500mg}{250mg} = \boxed{2mg}$

10. $\frac{0.3mg}{300mcg}$ 0.300 $\frac{300mcg}{300mcg} = \boxed{1mcg}$

Chapter 5: Proficiency Test #2

1. $\frac{10\,mg}{15\,mg} \times mL = \boxed{0.7\,mL}$

2. $\frac{0.1\,g}{200\,mg} \times 3\,mL$

$0.1\,g \left(\frac{1000\,mg}{1\,g}\right) = 100\,mg$

$\frac{100\,mg}{200\,mg} \times 3\,mL = 0.5 \times 3\,mL = \boxed{1.5\,mL}$

3. $\frac{1000\,mcg}{5000\,mcg} \times mL = \boxed{0.2\,mL}$

4. $\frac{25\,mg}{1\,g} \times \frac{100\,mL}{1000} \quad \frac{25\,mg}{1000\,mg} \times 100\,mL = \boxed{2.5\,mL}$

5. $\frac{0.5\,mg}{0.4\,mg} \times mL = \boxed{1.3\,mL}$

6. NPH 10 units
Humulin 3 units
$\boxed{13\ units}$

7. $\frac{1.2\,mEq}{0.5\,mEq} \times 1\,mL = \boxed{2.4\,mL}$

8. $\frac{500\,mcg}{1:1000} \quad \frac{0.5\,mg}{1,000\,mg} \times 1,000\,mL = \boxed{0.5\,mL}$

9.

a. 2mL sterile water

b. 1g / 2.6mL

c. $\frac{1g}{1g} \times 2.6mL = 2.6mL$

d. 2.6mL

e. ∅ = nothing left in vial

f. discard properly

10.

a. 1.8mL sterile water

b. 250mg/mL

c. $\frac{300mg}{250mg} \times 1mL = 1.2mL$

d. 1.2mL

e. Discard - must be used within 1 hr

f. No, discard properly.

Chapter 6: Proficiency Test 1 (1-14)

1. O: 1000 mL D5NS; run 150 mL/hour IV
   S: IV bag of 1000 mL D5NS

a. $\frac{1000}{150}$ = 6.7 hours

b. $\frac{150 \times 10}{60}$ = 25 gtt/min

$\frac{150 \times 60}{60}$ = 150 gtt/min

c. macrotubing

2. Order 100 mL LR 12 noon – 6pm IV

a. $\frac{100 \times 60}{360} = \frac{6,000}{360} = 16.6$ = 17 gtt/min

$\frac{180 \times 10}{360} = \frac{1,800}{360}$ = 3 gtt/min

3. Order 150mL NS IV over 3 hrs (180 min)
   Supply: bag of 250 mL NS for IV macrotubing, 15 gtt/mL; microtubing, 60 gtt/mL

a. Set the pump to run @ 50mL per hr and discard remainder

b. $\frac{150 \times 15}{180} = \frac{2250}{180}$ = 13 gtt/min

$\frac{150 \times 60}{180} = \frac{9,000}{180}$ = 50 gtt/min

c. microdrip

4. Order 500 mL D5W IV KVO. Solve for 24 hr. Infusion pump is available. Pump setting?

a. $\frac{500}{24} = \boxed{21 \text{ mL/hr}}$

5. Order doxycycline (Vibramycin) 100 mg IVPB every day.
Supply 100 mg powder
Package directions: 250 mL/D5W to infuse over 1 hr, macrodrip 10 gtt/mL

a. IVPB of 250 mL D5W mixed w/ 100 mg powder — 1 hr.

b. $\frac{250 \times 10}{60} = \frac{2500}{60} = \boxed{42 \text{ gtt/min}}$

6. Order: aminophylline 500 mg in 250 mL D5W to run 8 hr IV
Available: vial of aminophylline labeled 1 g in 10 mL; microdrip tubing

a. $\frac{500 \text{ mg}}{1 \text{ g} = 1{,}000 \text{ mg}} \times 10 \text{ mL} = \boxed{5 \text{ mL}}$

b. $\frac{250 \text{ mL}}{8 \text{ hr}} = \boxed{31 \text{ mL/hr}}$

7. $125 \times 20 = 2500 \text{ mL}$

$+$

$75 \times 4 = 300 \text{ mL}$

total = 2800 mL

8. a. 90 mL/hr

b. $\frac{1000}{90} = \boxed{11.1 \text{ hrs}}$

9.

0.5g → 500 mg

10. a.

- 75mL D5W - use 100 mL bag and remove 25mL
- add 5mL Bactrim
- 60min

b. 60mm

2nd Volume ~~75~~ 75 Rate: 75

90min

50mL/hr

Vol: 75

Rate: 50

11. $\frac{3}{4} \times 150 = 112.5 \text{mL}$

150 − 112.5 = 37.5mL water

12. $\frac{1}{2} \times 500\text{mL} = 250\text{mL}$

500mL − 250 mL = 250 mL water

13. $\frac{1}{4} \times 400\text{mL} = 100\text{mL}$

400mL − 100mL = 300mL water

14. OmL if full strength Isocal

Chpt 7: Self Test #1-2

1. a. $\frac{800 \text{ units/hr}}{25{,}000 \text{ units}} \times 250 \text{ mL}$

$= 8 \text{ mL/hr}$

b. $\frac{250 \text{ mL}}{8 \text{ mL}} \times \text{hr}$

$= \boxed{31.3 \text{ hr}}$

2. 100 mL/hr

3. $\frac{1000 \text{ mL}}{24 \text{ hr}} = 41.6 = 42 \text{ mL/hr}$

4. $\frac{10 \text{ mg/hr}}{125 \text{ mg}} \times 100 \text{ mL}$

$= \boxed{8 \text{ mL/hr}}$

5. $\frac{4 \text{ mg/hr}}{100 \text{ mg}} \times 100 \text{ mL}$

$= \boxed{4 \text{ mL/hr}}$

6. a. $\frac{15 \text{ units/hr}}{125 \text{ units}} \times 250 \text{ mL}$

$0.12 \times 250 = 30 \text{ mL/hr}$

b. $\frac{250 \text{ mL}}{30 \text{ mL}} \times \text{hr} = \boxed{8 \text{ hrs}}$

7. $\frac{250\,mL}{24\,hr} = 10.4\,mL/hr$

8. a. $\frac{1200\,units}{2500\,units} \times 500\,mL = 24\,mL/hr$

b. $\frac{500\,mL}{24\,mL/hr} = 20.8\,hrs$ or $21\,hrs$

9. a. $\frac{23\,units/hr}{250\,units} \times 250\,mL = 23\,mL/hr$

b. $\frac{250\,mL}{23\,mL/hr} = 10.9$ or $11\,hrs$

10. $\frac{100,000\,units/hr}{750,150\,units} = 33\,mL/hr$

Self Test #2

1. a. $\frac{60\,mg/hr}{2000\,mg} \times 250\,mL = 8\,mL/hr.$

b. $\frac{250\,mL}{8\,mL/hr} = 31.25\,hrs$

2. a. $\frac{120\,mg/hr}{300\,mg} \times 300\,mL = 120\,mL/hr$

b. $\frac{300\,mL}{120\,mL/hr} = 2.5\,hrs$

3. a. $\frac{120\text{mg/hr}}{1000\text{mg}} \times 500\text{mL} = 60\text{mL/hr}$

b. $\frac{500\text{mL}}{60\text{mL/hr}} = 8.3\text{hrs}$

4. $\frac{60\text{mg}}{450\text{mg}} \times 250\text{mL} = 33\text{mL/hr}$

5. a. $\frac{80\text{mg/hr}}{80\text{mg}} \times 250\text{mL}$

$\frac{60\text{mg/hr}}{80\text{mg}} \times 250\text{mL} = 188\text{mL/hr}$

b. $\frac{250\text{mL}}{188\text{mL/hr}} = 1.3\text{hrs}$