



OAKLAND
COMMUNITY
COLLEGE

NAME _____

NURSING DEPARTMENT

MEDICATION CALCULATION PROFICIENCY

LEVEL 4 (N254)

PRACTICE TEST

2009-2010

DIRECTIONS:

- Directions:
1. READ CAREFULLY
 2. Put your name on the test booklet
 3. Show all your work on the test booklet
 4. Place your final answer in the answer box for each question with the correct label
 5. You may use a calculator

NOTE: These are practice problems. There are 20 problems included. The actual test will contain 10 problems.

1.	<p>The order is for Retrover (zidovudine) 2 mg/kg po qd. Available to the nurse is Retrovic syrup 100 mg/5 ml. The patient weighs 176 pounds. How many ml of Retrovic syrup will the nurse administer?</p> <div data-bbox="272 363 544 499" style="border: 1px solid black; height: 65px; width: 167px; margin: 10px auto;"></div>
2.	<p>The order is for Darvocet N-100 (propoxyphene 100 mg/Tylenol 650 mg) one every 4-6 hours prn. The maximum amount of Tylenol to be given per day is 4 grams. The pateint has received four Darvocet N-100 caplets in the past 16 hours. How many more Darvocet N-100 caplets can the nurse administer in the next eight hours?</p> <div data-bbox="272 743 544 879" style="border: 1px solid black; height: 65px; width: 167px; margin: 10px auto;"></div>
3.	<p>The order is for dilaudid (hydromorphone) 1 mg IV push every 2-3 hours as needed. Available is dilaudid 2 mg/ml. The policy requires that the entire 2 mg vial be mixed with 0.9%NaCl to achieve a total volume of 10 ml prior to discarding any medication. How many ml of the dilaudid mixture will be given IV push?</p> <div data-bbox="256 1104 524 1241" style="border: 1px solid black; height: 65px; width: 165px; margin: 10px auto;"></div>
4.	<p>The order is for Rocephin (ceftriaxone) 1 gm IVPB every 24 hours. Available to the nurse is Rocephin 1 gm in 50 ml 0.9%NaCl to infuse over 45 minutes. The IV tubing delivers 15 gtt/ml. The IV will infuse at how many gtt/minute?</p> <div data-bbox="237 1411 505 1547" style="border: 1px solid black; height: 65px; width: 165px; margin: 10px auto;"></div>
5.	<p>The order is for Potassium 40 mEq in 500 ml of 0.9% NaCl to infuse over four hours. What is the rate in ml/hour?</p> <div data-bbox="227 1675 495 1812" style="border: 1px solid black; height: 65px; width: 165px; margin: 10px auto;"></div>

6.	<p>The order is for 8 units of Humulin Lente Insulin q am at 0800.</p> <p>In addition, there is a sliding scale for blood sugar coverage q am at 0800. The Sliding Scale uses Humulin Regular Insulin as follows:</p> <p style="padding-left: 40px;">Blood Sugar 0-200 no coverage 201-250 2 units 251-300 4 units 301-350 6 units 351-400 8 units > 400 call house officer</p> <p>The morning blood sugar is 275. How many total units of insulin will be given this am.</p> <div style="border: 1px solid black; width: 150px; height: 50px; margin-left: 40px;"></div>
7.	<p>The order is for Vancocin (vancomycin) 1500 mg IVPB now. Available to the nurse is Vancocin 1500 mg in 500 ml D5W. It is to infuse at a rate of 500 mg/30 minutes. How many minutes will this IVPB run?</p> <div style="border: 1px solid black; width: 150px; height: 50px; margin-left: 40px;"></div>
8.	<p>How fast will the above Vancocin (vancomycin) run in ml/hour on the pump?</p> <div style="border: 1px solid black; width: 150px; height: 50px; margin-left: 40px;"></div>
9.	<p>The order is for 1,000 Units of Heparin per hour. Available is 250 ml of 0.9%NaCl with 25,000 Units of heparin. What is the rate on the pump in ml/hour?</p> <div style="border: 1px solid black; width: 150px; height: 50px; margin-left: 40px;"></div>
10.	<p>The above heparin has been infusing at 1000 Units/hour. The PTT returns high. The physician decreases the heparin to 750 Units/hour. How many ml/hour will the nurse set on the infusion pump?</p> <div style="border: 1px solid black; width: 150px; height: 50px; margin-left: 40px;"></div>

11.	<p>The order is for Diflucan (fluconazole) 100 mg IVPB. Available to the nurse is diflucan 100 mg/50 ml of 0.9%NaCl to infuse at 200 mg/hr. The IV tubing delivers 15 gtt/ml. The IV will infuse at how many gtt/minute?</p> <div data-bbox="245 363 516 512" style="border: 1px solid black; height: 71px; width: 167px; margin: 10px auto;"></div>
12.	<p>The order is for Vicodan (hydrocodone 5mg/acetaminophen 500 mg) 1-2 tablets every 4-6 hours prn. The maximum amount of Tylenol to be given per day is 4 grams. The patient has received five Vicodan in the last 12 hours. How many more Vicodan tablets can the nurse administer in the next 12 hours?</p> <div data-bbox="245 705 516 854" style="border: 1px solid black; height: 71px; width: 167px; margin: 10px auto;"></div>
13.	<p>The order is for Vicodan (hydrocodone 5 mg/acetaminophen 500 mg) 1-2 tablets q 4-6 hours. The maximum amount of Tylenol to be given per day is 4 grams. The patient has received three Vicodan tablets in the past 16 hours. What is the maximum number of Vicodan tablets the nurse can administer in the next eight hours?</p> <div data-bbox="245 1071 516 1220" style="border: 1px solid black; height: 71px; width: 167px; margin: 10px auto;"></div>
14.	<p>The order is for Darvocet N-100 (propoxyphene 100 mg/Tylenol 650 mg) one every 4-6 hours prn. The maximum amount of Tylenol to be given per day is 4 grams. The pateint has received two Darvocet N-100 caplets in the past 8 hours. What is the maximum number of Darvocet N-100 caplets the nurse can administer in the next 16 hours?</p> <div data-bbox="245 1465 516 1614" style="border: 1px solid black; height: 71px; width: 167px; margin: 10px auto;"></div>
15.	<p>The order is for phenergan (promethazine) 12.5 mg IV push every 6 hours as needed. Available is phenergan 25 mg/2 ml. The policy requires that the entire 25 mg vial be mixed with 0.9%NaCl to achieve a total volume of 10 ml prior to discarding any medication. How many ml of the phenergan mixture will be given IV push?</p> <div data-bbox="245 1780 516 1929" style="border: 1px solid black; height: 71px; width: 167px; margin: 10px auto;"></div>

16.	The order is for 1,000 Units of Heparin per hour. Available is 500 ml of 0.9%NaCl with 25,000 Units of heparin. What is the rate on the pump in ml/hour? <input data-bbox="245 268 516 432" type="text"/>
17.	The above heparin has been infusing at 1000 Units/hour. The PTT returns high. The physician decreases the heparin to 750 Units/hour. How many ml/hour will the nurse set on the infusion pump? <input data-bbox="245 594 516 741" type="text"/>
18.	The order is for Protonix (pantoprazole) 60 mg in 100 ml 0.9% NaCl q 12 hours to infuse over 20 minutes. What is the rate on the pump in ml/hour? <input data-bbox="245 879 516 1026" type="text"/>
19.	The order is for Cipro (ciprofloxacin) 400 mg in 200 ml 0.9% NaCl q 12 hours to infuse over 75 minutes. What is the rate on the pump in ml/hour? <input data-bbox="228 1144 496 1291" type="text"/>
20.	Given the above rate on the pump for Cipro, the IV will infuse at how many gtts/minute when the IV tubing delivers 20 gtt/ml? <input data-bbox="228 1438 496 1585" type="text"/>

	ANSWERS
1.	8 ml
2.	2 tablets
3.	5 ml
4.	17 gtt/min (cannot deliver a partial drop so 16.6666 must be rounded to 17)
5.	125 ml/hr
6.	12 units (add the scheduled insulin and the coverage insulin together)
7.	90 minutes
8.	333 ml/hr (or 333.3 ml/hr if the pump can deliver to the 10 th)
9.	10 ml/hr
10.	7.5 ml/hour (or 8 ml/hour depending if pump cannot read to the 10 th)
11.	25 gtt/min
12.	3 tablets
13.	4 tablets (mathematically the answer is 5 tablets but the order reads 1-2 tablets every 4-6 hours. The most you could give in the eight hour time period is 4 tablets even though only 3 tablets were given in the previous 16 hours. This one is challenging!)
14.	4 tablets
15.	5 ml (25 mg is in 10 ml so to give 12.5 mg you would need half the volume)
16.	20 ml/hr (This time the 25000 Units is mixed in 500 ml not 250 ml. Se the difference from #9 above)
17.	15 ml/hr (See the difference from #10 above)
18.	300 ml/hr
19.	160 ml/hr
20.	53 gtt/min (Remember, you cannot give a partial drip so 53.333 rounds to 53 gtt/min)

Revised 4/06