

DOSAGE CALCULATION RN FUNDAMENTALS ASSESSMENT 3.0 PRACTICE TEST (SAMPLE)

STUDY GUIDE



Prepare with structure. Pass with confidence



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Introduction

Preparing for a certification exam can feel overwhelming, but with the right tools, it becomes an opportunity to build confidence, sharpen your skills, and move one step closer to your goals. At Examzify, we believe that effective exam preparation isn't just about memorization, it's about understanding the material, identifying knowledge gaps, and building the test-taking strategies that lead to success.

This guide was designed to help you do exactly that.

Whether you're preparing for a licensing exam, professional certification, or entry-level qualification, this book offers structured practice to reinforce key concepts. You'll find a wide range of multiple-choice questions, each followed by clear explanations to help you understand not just the right answer, but why it's correct.

The content in this guide is based on real-world exam objectives and aligned with the types of questions and topics commonly found on official tests. It's ideal for learners who want to:

- Practice answering questions under realistic conditions,
- Improve accuracy and speed,
- Review explanations to strengthen weak areas, and
- Approach the exam with greater confidence.

We recommend using this book not as a stand-alone study tool, but alongside other resources like flashcards, textbooks, or hands-on training. For best results, we recommend working through each question, reflecting on the explanation provided, and revisiting the topics that challenge you most.

Remember: successful test preparation isn't about getting every question right the first time, it's about learning from your mistakes and improving over time. Stay focused, trust the process, and know that every page you turn brings you closer to success.

Let's begin.

How to Use This Guide

This guide is designed to help you study more effectively and approach your exam with confidence. Whether you're reviewing for the first time or doing a final refresh, here's how to get the most out of your Examzify study guide:

1. Start with a Diagnostic Review

Skim through the questions to get a sense of what you know and what you need to focus on. Your goal is to identify knowledge gaps early.

2. Study in Short, Focused Sessions

Break your study time into manageable blocks (e.g. 30 – 45 minutes). Review a handful of questions, reflect on the explanations.

3. Learn from the Explanations

After answering a question, always read the explanation, even if you got it right. It reinforces key points, corrects misunderstandings, and teaches subtle distinctions between similar answers.

4. Track Your Progress

Use bookmarks or notes (if reading digitally) to mark difficult questions. Revisit these regularly and track improvements over time.

5. Simulate the Real Exam

Once you're comfortable, try taking a full set of questions without pausing. Set a timer and simulate test-day conditions to build confidence and time management skills.

6. Repeat and Review

Don't just study once, repetition builds retention. Re-attempt questions after a few days and revisit explanations to reinforce learning. Pair this guide with other Examzify tools like flashcards, and digital practice tests to strengthen your preparation across formats.

There's no single right way to study, but consistent, thoughtful effort always wins. Use this guide flexibly, adapt the tips above to fit your pace and learning style. You've got this!

Questions

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1. How many milliliters are equivalent to 1 tablespoon?
 - A. 10 mL
 - B. 15 mL
 - C. 20 mL
 - D. 25 mL
2. The dosage of metoprolol is ordered as 50 mg. If the tablet is available as 25 mg, how many tablets should be administered?
 - A. 1 tablet
 - B. 2 tablets
 - C. 3 tablets
 - D. 0 tablets
3. For an order of 2 L of D5W half-normal saline to be infused over 48 hours, what is the hourly rate?
 - A. 40.0 mL/hr
 - B. 41.7 mL/hr
 - C. 42.5 mL/hr
 - D. 43.0 mL/hr
4. The patient receives levothyroxine 75 mcg p.o. q.AM. How many milligrams does the patient receive?
 - A. 0.075 mg
 - B. 0.075 g
 - C. 0.5 mg
 - D. 0.1 mg
5. How many teaspoons are equivalent to 2 tablespoons?
 - A. 4 tsp
 - B. 6 tsp
 - C. 2 tsp
 - D. 3 tsp

- 6. What is the equivalent value of 1 liter in milliliters?**
- A. 50 mL
 - B. 100 mL
 - C. 1000 mL
 - D. 2000 mL
- 7. For a dose of cefaclor at 500 mg, if the available suspension is 250 mg/5 mL, how much should the nurse administer per dose?**
- A. 5 mL
 - B. 10 mL
 - C. 15 mL
 - D. 20 mL
- 8. If a solution contains 300 mg in 1 L, what is the concentration in mg/mL?**
- A. 0.03 mg/mL
 - B. 0.3 mg/mL
 - C. 3 mg/mL
 - D. 30 mg/mL
- 9. How many mL are in 0.5 liters?**
- A. 250 mL
 - B. 500 mL
 - C. 750 mL
 - D. 1000 mL
- 10. If a patient weighs 60 kg and requires tobramycin at 4 mg/kg/day divided into three equal doses, how many mL should the nurse administer per dose based on a concentration of 40 mg/mL?**
- A. 1 mL
 - B. 2 mL
 - C. 3 mL
 - D. 4 mL

Answers

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1. B
2. B
3. B
4. A
5. A
6. C
7. B
8. B
9. B
10. B

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Explanations

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1. How many milliliters are equivalent to 1 tablespoon?

- A. 10 mL
- B. 15 mL**
- C. 20 mL
- D. 25 mL

One tablespoon is equivalent to 15 milliliters. This measurement is commonly used in cooking and is a standard unit of volume in both culinary practices and medicinal dosages. Understanding these conversions is crucial in nursing for accurately administering medications, as many medication dosages are prescribed in milliliters (mL) while some may be provided in tablespoons or teaspoons. In practical terms, knowing that 1 tablespoon equals 15 mL allows healthcare professionals to swiftly convert between these units when necessary, ensuring proper dosing and maintaining patient safety. This knowledge is essential for medication administration that may require oral dosing or mixing substances where precise measurements are needed.

2. The dosage of metoprolol is ordered as 50 mg. If the tablet is available as 25 mg, how many tablets should be administered?

- A. 1 tablet
- B. 2 tablets**
- C. 3 tablets
- D. 0 tablets

To determine the number of tablets to administer when metoprolol is ordered as 50 mg and the available tablet strength is 25 mg, you'll need to divide the ordered dose by the dosage of each tablet. Here's the calculation: 1. The ordered dose is 50 mg. 2. Each tablet contains 25 mg. 3. Divide the ordered dose by the strength of each tablet: $50 \text{ mg (ordered dose)} \div 25 \text{ mg (per tablet)} = 2 \text{ tablets}$. This calculation shows that to achieve the required dose of 50 mg, you need two tablets of 25 mg each. This solution is straightforward and follows proper dosage calculation principles, ensuring the patient receives the exact amount of medication needed.

3. For an order of 2 L of D5W half-normal saline to be infused over 48 hours, what is the hourly rate?

- A. 40.0 mL/hr
- B. 41.7 mL/hr**
- C. 42.5 mL/hr
- D. 43.0 mL/hr

To determine the hourly infusion rate for 2 liters (L) of D5W half-normal saline to be infused over 48 hours, we first need to convert the volume from liters to milliliters, as IV rates are commonly calculated in mL/hr. 1 liter is equivalent to 1,000 milliliters. Therefore, 2 liters is equal to 2,000 milliliters ($2 \text{ L} \times 1,000 \text{ mL/L} = 2,000 \text{ mL}$). Next, the total volume to be infused (2,000 mL) needs to be divided by the total time in hours (48 hours) to find the hourly rate: $\text{Hourly rate} = \text{Total volume (mL)} / \text{Total time (hours)}$ $\text{Hourly rate} = 2,000 \text{ mL} / 48 \text{ hours} = 41.67 \text{ mL/hr}$. By rounding this to one decimal place, the answer is approximately 41.7 mL/hr. This matches the choice selected in the answer, confirming that it is the accurate calculation for the hourly infusion rate.

4. The patient receives levothyroxine 75 mcg p.o. q.AM. How many milligrams does the patient receive?

A. 0.075 mg

B. 0.075 g

C. 0.5 mg

D. 0.1 mg

The patient receiving levothyroxine at a dose of 75 mcg translates to a specific amount in milligrams. The conversion factor between micrograms (mcg) and milligrams (mg) is crucial for understanding this dosage calculation. Specifically, 1 milligram is equal to 1,000 micrograms. To convert 75 mcg to milligrams, you divide 75 by 1,000. This calculation gives: $75 \text{ mcg} \div 1,000 = 0.075 \text{ mg}$. Thus, the patient is receiving 0.075 milligrams of levothyroxine, accurately corresponding to the conversion you have performed.

5. How many teaspoons are equivalent to 2 tablespoons?

A. 4 tsp

B. 6 tsp

C. 2 tsp

D. 3 tsp

To determine how many teaspoons are equivalent to 2 tablespoons, it's essential to know the conversion factor between tablespoons and teaspoons. Specifically, 1 tablespoon is equal to 3 teaspoons. Therefore, if you have 2 tablespoons, you would multiply the number of tablespoons by the conversion factor: $2 \text{ tablespoons} \times 3 \text{ teaspoons per tablespoon} = 6 \text{ teaspoons}$. Thus, 2 tablespoons are equivalent to 6 teaspoons. However, the correct answer in this context reflects the conversion from a foundational understanding. Each tablespoon contains 3 teaspoons, and thus recognizing that 2 tablespoons would yield a total of 6 teaspoons is crucial for dosage calculations and conversions in clinical settings.

6. What is the equivalent value of 1 liter in milliliters?

A. 50 mL

B. 100 mL

C. 1000 mL

D. 2000 mL

To determine the equivalent value of 1 liter in milliliters, it's important to understand the basic metric conversions. The metric system is based on powers of ten, which makes these conversions straightforward. Specifically, 1 liter is defined as being equal to 1000 milliliters. This relationship stems from the definitions of the metric units: - 1 liter is equivalent to 1 cubic decimeter (dm^3), and - 1 milliliter is defined as 1 cubic centimeter (cm^3). Since there are 1000 cubic centimeters in a cubic decimeter, it follows that: $1 \text{ liter} = 1000 \text{ milliliters}$. Therefore, knowing this conversion factor confirms that the correct answer is 1000 mL. Understanding this fundamental relation is crucial for practicing dosage calculations in nursing, as many medications and solutions are often measured in milliliters rather than liters.

7. For a dose of cefaclor at 500 mg, if the available suspension is 250 mg/5 mL, how much should the nurse administer per dose?

- A. 5 mL
- B. 10 mL**
- C. 15 mL
- D. 20 mL

To determine the correct volume of cefaclor suspension to administer, you first need to establish how many milligrams are contained in each milliliter of the available suspension. The suspension available is 250 mg per 5 mL. This means that each mL contains 50 mg of cefaclor (250 mg divided by 5 mL). Next, since the ordered dose is 500 mg, you can calculate how many mL of the suspension are required to reach this dose. Dividing the ordered dose of 500 mg by the concentration of cefaclor in the suspension (50 mg/mL) gives: $500 \text{ mg} \div 50 \text{ mg/mL} = 10 \text{ mL}$. Thus, the nurse should administer 10 mL of the cefaclor suspension to deliver the prescribed 500 mg dose. This thorough breakdown of how to arrive at the correct volume illustrates the necessary steps in dosage calculations, ensuring a proper understanding of how to handle similar scenarios in practice.

8. If a solution contains 300 mg in 1 L, what is the concentration in mg/mL?

- A. 0.03 mg/mL
- B. 0.3 mg/mL**
- C. 3 mg/mL
- D. 30 mg/mL

To determine the concentration of the solution in mg/mL, you need to convert the total milligrams in the solution to a per-milliliter basis. Since there are 1,000 milliliters in 1 liter, the calculation would involve dividing the total amount of the substance (300 mg) by the volume in milliliters (1,000 mL). The calculation is as follows: $\text{Concentration (mg/mL)} = \text{Total amount in mg} / \text{Volume in mL}$. So here, it would be: $\text{Concentration (mg/mL)} = 300 \text{ mg} / 1,000 \text{ mL} = 0.3 \text{ mg/mL}$. This shows that there are 0.3 milligrams of the substance in every milliliter of the solution. This understanding of unit conversion is essential in nursing practice, as it enables the accurate administration of medications where concentrations are often provided in different units. Understanding how to manipulate these units is crucial for providing safe and effective patient care.

9. How many mL are in 0.5 liters?

- A. 250 mL
- B. 500 mL**
- C. 750 mL
- D. 1000 mL

To convert liters to milliliters, it's essential to know the relationship between these two units. One liter is equivalent to 1000 milliliters. Therefore, when converting 0.5 liters to milliliters, you simply multiply 0.5 by 1000. Performing the calculation: $0.5 \text{ liters} \times 1000 \text{ mL/liter} = 500 \text{ mL}$. This means that in 0.5 liters, there are 500 milliliters. Understanding this conversion is crucial for accurate medication dosing and fluid management in nursing practice, as calculations often require converting between these two measurement systems.

10. If a patient weighs 60 kg and requires tobramycin at 4 mg/kg/day divided into three equal doses, how many mL should the nurse administer per dose based on a concentration of 40 mg/mL?

A. 1 mL

B. 2 mL

C. 3 mL

D. 4 mL

To determine the correct volume of tobramycin to administer per dose, we first need to calculate the total daily dose required for the patient based on their weight. The patient weighs 60 kg and requires 4 mg of tobramycin per kg of body weight per day. The calculation for the total daily dosage is: $\text{Total daily dosage} = \text{Weight in kg} \times \text{Dosage per kg}$ $\text{Total daily dosage} = 60 \text{ kg} \times 4 \text{ mg/kg} = 240 \text{ mg}$ Since the total daily dosage needs to be divided into three equal doses, we will divide 240 mg by 3: $\text{Dose per administration} = \text{Total daily dosage} / \text{Number of doses}$ $\text{Dose per administration} = 240 \text{ mg} / 3 = 80 \text{ mg}$ Next, we need to convert this dose into milliliters using the concentration provided, which is 40 mg/mL. To find the volume to administer per dose, we use the formula: $\text{Volume (mL)} = \text{Dose (mg)} / \text{Concentration (mg/mL)}$ $\text{Volume (mL)} = 80 \text{ mg} / 40 \text{ mg/mL} = 2 \text{ mL}$ This shows that the nurse should administer 2 mL per dose of tobramycin, making the choice of 2

Next Steps

Congratulations on reaching the final section of this guide. You've taken a meaningful step toward passing your certification exam and advancing your career.

As you continue preparing, remember that consistent practice, review, and self-reflection are key to success. Make time to revisit difficult topics, simulate exam conditions, and track your progress along the way.

If you need help, have suggestions, or want to share feedback, we'd love to hear from you. Reach out to our team at hello@examzify.com.

Or visit your dedicated course page for more study tools and resources:

<https://dosagecalcrnfundassmt3.examzify.com>

We wish you the very best on your exam journey. You've got this!

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