Pharmacy Technician Calculations Practice Test (Sample)

Study Guide

Everything you need from our exam experts!

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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

1. **A patient requires medication that must be stored at a temperature of 4 degrees Centigrade. What is the appropriate Fahrenheit temperature?**

   A. 32.8 degrees Fahrenheit

   B. 39.2 degrees Fahrenheit

   C. 50 degrees Fahrenheit

   D. 40 degrees Fahrenheit

2. **How many pounds are there in 1 kilogram?**

   A. 1.5 lb

   B. 2.0 lb

   C. 2.2 lb

   D. 3.0 lb

3. **When converting milliliters to liters, what is the appropriate factor to use?**

   A. 1 L = 1000 mL

   B. 1 L = 500 mL

   C. 1 L = 250 mL

   D. 1 L = 750 mL

4. **How many micrograms of digoxin are in 0.4 ml of a solution with a concentration of 50 mcg per ml?**

   A. 10 mcg

   B. 20 mcg

   C. 30 mcg

   D. 40 mcg

5. **In a 70% solution of Dextrose, how many kilograms of Dextrose are in 400 mL of a 1000 mL solution?**

   A. 1.2 kg

   B. 2.8 kg

   C. 0.7 kg

   D. 3.5 kg

6. If a prescription requires 250 mg of Metronidazole, how many tablets are needed if each tablet contains 500 mg?

A. 80 tablets

B. 24 tablets

C. 12 tablets

D. 30 tablets

7. If a prescription for Prevacid specifies #100 with a 2 refill limit but has a 34-day supply limit, how many refills of 34 would be available?

A. 5 refills

B. 6 refills

C. 7 refills

D. 8 refills

8. If water freezes at 0 degrees Centigrade, what is this in degrees Fahrenheit?

A. 30 degrees Fahrenheit

B. 32 degrees Fahrenheit

C. 34 degrees Fahrenheit

D. 36 degrees Fahrenheit

9. You diluted 40 ml of a 50% dextrose solution with water to a total volume of 100 ml. What is the concentration of dextrose in the new solution?

A. 20%

B. 25%

C. 30%

D. 50%

10. What is the value of 1 teaspoon in milliliters?

A. 2.5 mL

B. 5 mL

C. 10 mL

D. 15 mL

Answers

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

Explanations

1. A patient requires medication that must be stored at a temperature of 4 degrees Centigrade. What is the appropriate Fahrenheit temperature?

A. 32.8 degrees Fahrenheit

B. 39.2 degrees Fahrenheit

C. 50 degrees Fahrenheit

D. 40 degrees Fahrenheit

To convert a temperature from Celsius to Fahrenheit, the formula used is: $$ F = (C \times \frac{9}{5}) + 32 $$ In this case, the Celsius temperature is 4 degrees. Applying the formula: 1. Multiply 4 (the Celsius temperature) by $\frac{9}{5}$: $$ 4 \times \frac{9}{5} = 7.2 $$ 2. Add 32 to the result: $$ 7.2 + 32 = 39.2 $$ Thus, 4 degrees Celsius is equivalent to 39.2 degrees Fahrenheit. This temperature is critical for proper medication storage, as maintaining the right temperature ensures the efficacy and safety of the medication. The chosen answer corresponds exactly to the conversion, indicating that it is the appropriate temperature for storing the medication as specified.

2. How many pounds are there in 1 kilogram?

A. 1.5 lb

B. 2.0 lb

C. 2.2 lb

D. 3.0 lb

One kilogram is equal to approximately 2.2 pounds. This conversion is based on the standard relationship between kilograms and pounds, where 1 kilogram is defined as being equal to 2.20462 pounds. Therefore, for practical purposes in a pharmacy or healthcare setting, rounding this number to 2.2 pounds is commonly accepted. Understanding this conversion is important in pharmacy practice, especially when it comes to dosing medications or preparing substances that require weight measurements in both metric and imperial units. Many medications may have their dosages expressed in kilograms, so being able to convert to pounds can be essential for calculating the correct doses for patients, particularly in the context of dietary recommendations, pediatric dosing, or formulations.

3. When converting milliliters to liters, what is the appropriate factor to use?

A. 1 L = 1000 mL

B. 1 L = 500 mL

C. 1 L = 250 mL

D. 1 L = 750 mL

When converting milliliters to liters, the appropriate factor is that 1 liter is equal to 1000 milliliters. This means that to convert milliliters to liters, one would divide the number of milliliters by 1000. For example, if you have 5000 mL and you want to convert it to liters, you would perform the calculation 5000 mL ÷ 1000 = 5 L. This conversion factor is essential in pharmaceutical calculations, as precise dosing often requires accurate measurements in liters or milliliters, depending on the context. The other options suggest incorrect relationships between liters and milliliters, which could lead to significant errors in calculations. Understanding this conversion is fundamental in pharmacy practice, where accurate measurement of liquid medications is critical for patient safety and effective treatment.

4. How many micrograms of digoxin are in 0.4 ml of a solution with a concentration of 50 mcg per ml?

A. 10 mcg

B. 20 mcg

C. 30 mcg

D. 40 mcg

To determine how many micrograms of digoxin are in 0.4 ml of a solution with a concentration of 50 mcg per ml, you apply the formula for calculating the amount of drug based on concentration and volume. First, recognize that the concentration of the solution is 50 mcg per ml, meaning that each milliliter of solution contains 50 micrograms of digoxin. To find out how much is in 0.4 ml, you multiply the concentration by the volume: Amount of digoxin = Concentration (in mcg/ml) x Volume (in ml) = 50 mcg/ml x 0.4 ml Carrying out the multiplication: 50 mcg/ml * 0.4 ml = 20 mcg Thus, in 0.4 ml of the solution, there are 20 micrograms of digoxin. This matches the correct answer, confirming that the solution's concentration and the volume were applied correctly in the calculation.

5. In a 70% solution of Dextrose, how many kilograms of Dextrose are in 400 mL of a 1000 mL solution?

A. 1.2 kg

B. 2.8 kg

C. 0.7 kg

D. 3.5 kg

To determine how many kilograms of Dextrose are in 400 mL of a 70% solution, it's essential to first understand what a 70% solution signifies. A 70% solution indicates that there are 70 grams of Dextrose for every 100 mL of the solution. To find out how much Dextrose is in 400 mL, we can set up a proportion based on the known concentration. Since the concentration is 70 grams per 100 mL, we can use this ratio to calculate the amount in 400 mL: 1. Calculate the grams of Dextrose in 400 mL: \[\text{Grams of Dextrose} = \left(\frac{70 \text{ grams}}{100 \text{ mL}} \right) \times 400 \text{ mL} \] Performing the multiplication: \[\text{Grams of Dextrose} = \left(70 \times 4 \right) = 280 \text{ grams} \] 2. Convert grams to kilograms: Since 1 kilogram equals 1000 grams, we convert 280 grams to

6. If a prescription requires 250 mg of Metronidazole, how many tablets are needed if each tablet contains 500 mg?

A. 80 tablets

B. 24 tablets

C. 12 tablets

D. 30 tablets

To determine the number of tablets needed when a prescription requires 250 mg of Metronidazole and each tablet contains 500 mg, you can use a straightforward calculation based on the ratio of the required dose to the dose provided by each tablet. First, calculate how many milligrams are needed per tablet. Since each tablet contains 500 mg, you can find out how many tablets are necessary to reach the required 250 mg by dividing the desired dose by the amount in each tablet: 250 mg required / 500 mg per tablet = 0.5 tablets. This means that one tablet contains more than enough medication to meet the prescribed dose. To fulfill the prescription of 250 mg, only half a tablet is needed. Since it is not plausible to prescribe half a tablet without indicating a specific dosing schedule, typically, the pharmacy would interpret this to mean one whole tablet is provided, effectively covering the 250 mg. In the context of the available choices, it would be more logical to recognize that 500 mg would exceed the requirement. Hence, if the question asked for rounding to the nearest whole tablet or logical consideration for dosing, you would note that the request was fulfilled satisfactorily without giving a specific prescription for a half tablet, thus generally leading

7. If a prescription for Prevacid specifies #100 with a 2 refill limit but has a 34-day supply limit, how many refills of 34 would be available?

A. 5 refills

B. 6 refills

C. 7 refills

D. 8 refills

To determine how many 34-day refills are available for the prescription of Prevacid that specifies a total quantity of 100 tablets and a refill limit of 2, along with a 34-day supply limit, we start by calculating how many days the initial supply lasts. Given that each prescription contains 100 tablets, we need to know the recommended dosing for Prevacid to establish how many tablets are taken per day. Generally, Prevacid (lansoprazole) is commonly dosed at 15 mg or 30 mg daily, depending on the condition being treated. Assuming a common starting dose of 30 mg, which is typically one tablet per day, we can conclude: 1. **Calculate the Duration of the Initial Supply: If the patient takes one tablet per day, the first fill of 100 tablets would last for 100 days. 2. **Establishing the Refill Limit**: The prescription allows for 2 refills. Each refill can also provide a 34-day supply. 3. **Considering the Supply Limits**: Though the initial supply lasts for 100 days, we need to observe the refill limitations. Each refill must not exceed a 34**

8. If water freezes at 0 degrees Centigrade, what is this in degrees Fahrenheit?

A. 30 degrees Fahrenheit

B. 32 degrees Fahrenheit

C. 34 degrees Fahrenheit

D. 36 degrees Fahrenheit

When converting Celsius to Fahrenheit, the formula used is: $°F = (°C \times 9/5) + 32$ For freezing point of water, the temperature in Celsius is 0 degrees. Plugging this into the formula gives: $°F = (0 \times 9/5) + 32$ $°F = 0 + 32$ $°F = 32$ degrees Thus, the freezing point of water at 0 degrees Celsius corresponds to 32 degrees Fahrenheit. This is a well-established conversion point and is a fundamental reference in temperature science, making it important for anyone in fields related to cooking, weather, and of course, pharmacy where precise measurements are crucial.

9. You diluted 40 ml of a 50% dextrose solution with water to a total volume of 100 ml. What is the concentration of dextrose in the new solution?

A. 20%

B. 25%

C. 30%

D. 50%

To determine the concentration of dextrose in the new solution after dilution, start by calculating the total amount of dextrose present in the original solution before dilution. In the original 40 ml of a 50% dextrose solution, the concentration means there are 50 grams of dextrose in every 100 ml of solution. Therefore, in 40 ml of the solution: \[\text{Amount of dextrose} = \left(\frac{50 \text{ g}}{100 \text{ ml}}\right) \times 40 \text{ ml} = 20 \text{ g} \] After diluting this solution with water to a total volume of 100 ml, the total amount of dextrose remains unchanged at 20 grams, but now it is spread out over a larger volume of solution. Now, to find the new concentration of dextrose, use the formula for concentration: \[\text{Concentration} = \left(\frac{\text{Amount of dextrose}}{\text{Total volume of solution}}\right) \times 100 \] Substituting the known values: \[\text{Concentration} = \left(

10. What is the value of 1 teaspoon in milliliters?

A. 2.5 mL

B. 5 mL

C. 10 mL

D. 15 mL

One teaspoon is commonly accepted as being equivalent to 5 milliliters in volume measurements. This conversion is widely used in both cooking and medicine, making it an important fact for pharmacy technicians and others working in healthcare settings where precise measurements are crucial. The knowledge of this conversion is essential when measuring doses, especially for liquid medications, as accurate dosing is vital for effective treatment and patient safety. Understanding this standard measurement enables pharmacy technicians to accurately dispense medications and advise patients on proper dosing instructions. Thus, knowing that 1 teaspoon equals 5 mL helps ensure that medication is administered safely and effectively according to the prescribed dosage.

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://pharmacytechcalc.examzify.com

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