Infusion Calculations Practice Test (Sample)

Study Guide

BY EXAMZIFY

Everything you need from our exam experts!

Table of Contents

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. The physician reduced an IV to 30 mL/h. The IV bag has 270 mL remaining. If the current time is 10:30 AM, at what time will the infusion be completed?

   A. 19:30 or 7:30 PM

   B. 18:00 or 6:00 PM

   C. 19:00 or 7:00 PM

   D. 20:30 or 8:30 PM

2. At 0300 hours, a 2 L of normal saline is set running through an infusion pump at 85 mL/h. After 8 hours, the rate is increased to 120 mL/h. At what time will the infusion be completed?

   A. 1800 h

   B. 2100 h

   C. 2300 h

   D. 2200 h

3. Doctor orders 1.5 litres of Lactated Ringers solution to be infused over 12 hours. The IV tubing delivers 60 gtt/mL. What is the rate in gtt/min, rounded to the nearest whole number?

   A. 110 gtt/min

   B. 120 gtt/min

   C. 115 gtt/min

   D. 125 gtt/min

4. 600 mL of normal saline is to be infused over 12 hours using a micro-drop giving set delivering 60 gtt/mL. What is the drip rate in gtt/min?

   A. 50 gtt/min

   B. 60 gtt/min

   C. 40 gtt/min

   D. 55 gtt/min

5. A 167 mL IV bag is to be infused over 60 minutes with a drop factor of 60 gtt/mL. What is the drip rate in gtt/min?

  A. 133 gtt/min

  B. 180 gtt/min

  C. 167 gtt/min

  D. 150 gtt/min

6. What is the hourly flow rate for infusing 1.5 L of D5% in 1/5 normal saline over 20 hours?

  A. 60 mL/h

  B. 70 mL/h

  C. 80 mL/h

  D. 75 mL/h

7. Starting at 0700 hours, half a litre of dextrose 5% is set up to run at 40 mL/h. At what time will the bag be finished?

  A. 1830 h

  B. 1900 h

  C. 1930 h

  D. 2000 h

8. A burette pump must deliver 600 mL of fluid over 3 hours. What is the rate in mL/h?

  A. 180 mL/h

  B. 190 mL/h

  C. 200 mL/h

  D. 210 mL/h

9. A young male patient is to be given one litre of dextrose 4% in 1/5 normal saline. The infusion pump is set at 80 mL/h. How long will it take to give the litre?

  A. 12 hours

  B. 11 hours

  C. 14 hours

  D. 12 hours 30 minutes

10. A patient has an order to infuse 100 mL of D51/2NS with 10 mEq of KCl over 30 minutes. The IV set delivers 10 gtt/mL. What is the correct flow rate in drops per minute (gtt/min), rounded to the nearest whole number?

A. 33 gtt/min

B. 31 gtt/min

C. 44 gtt/min

D. 22 gtt/min

Answers

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

Explanations

1. **The physician reduced an IV to 30 mL/h. The IV bag has 270 mL remaining. If the current time is 10:30 AM, at what time will the infusion be completed?**

   A. 19:30 or 7:30 PM

   B. 18:00 or 6:00 PM

   C. 19:00 or 7:00 PM

   D. 20:30 or 8:30 PM

   The main idea is to find how long the infusion will take at the current rate, then add that time to the present clock time. If the IV is flowing at 30 mL per hour and there are 270 mL left, the time to finish is 270 divided by 30, which equals 9 hours. Starting from 10:30 AM and adding 9 hours brings you to 7:30 PM, which is 19:30 in 24-hour time. So the infusion will complete at 19:30 or 7:30 PM, matching the given options.

2. **At 0300 hours, a 2 L of normal saline is set running through an infusion pump at 85 mL/h. After 8 hours, the rate is increased to 120 mL/h. At what time will the infusion be completed?**

   A. 1800 h

   B. 2100 h

   C. 2300 h

   D. 2200 h

   When an infusion rate changes partway through, split the total volume into portions delivered at each rate and add the times. The patient must deliver 2000 mL. In the first 8 hours at 85 mL/h, that portion equals 8 × 85 = 680 mL. So 2000 − 680 = 1320 mL remains. At 120 mL/h, delivering 1320 mL takes 1320 ÷ 120 = 11 hours. The total time from the start is 8 + 11 = 19 hours. Starting at 0300, adding 19 hours brings us to 22:00, or 2200 hours.

3. **Doctor orders 1.5 litres of Lactated Ringers solution to be infused over 12 hours. The IV tubing delivers 60 gtt/mL. What is the rate in gtt/min, rounded to the nearest whole number?**

   A. 110 gtt/min

   B. 120 gtt/min

   C. 115 gtt/min

   D. 125 gtt/min

   Calculating IV flow rate relies on combining how much fluid to give, over how long, and the tubing's drip factor. Use Rate = Volume in mL × Drip factor (gtt/mL) ÷ Time in minutes. Convert the data: 1.5 L equals 1500 mL, and 12 hours equals 720 minutes. With a drip factor of 60 gtt/mL, the rate is (1500 × 60) ÷ 720 = 90000 ÷ 720 = 125 gtt/min. So the infusion rate is 125 gtt/min.

4. 600 mL of normal saline is to be infused over 12 hours using a micro-drop giving set delivering 60 gtt/mL. What is the drip rate in gtt/min?

A. 50 gtt/min

B. 60 gtt/min

C. 40 gtt/min

D. 55 gtt/min

To find the drip rate in gtt/min, multiply the volume to infuse by the drop factor, then divide by the infusion time in minutes. Convert 12 hours to minutes: 12 × 60 = 720 minutes. So, rate = (600 mL × 60 gtt/mL) / 720 min = 36000 / 720 = 50 gtt/min. Another quick check: 600 mL over 720 minutes is 0.833... mL per minute, and with 60 gtt per mL that becomes 0.833... × 60 ≈ 50 gtt/min.

5. A 167 mL IV bag is to be infused over 60 minutes with a drop factor of 60 gtt/mL. What is the drip rate in gtt/min?

A. 133 gtt/min

B. 180 gtt/min

C. 167 gtt/min

D. 150 gtt/min

Drip rate is determined by converting the infusion to drops per minute using the drop factor. First, find how many milliliters occur each minute: 167 mL divided by 60 minutes equals about 2.783 mL per minute. With a drop factor of 60 gtt per mL, multiply the mL per minute by the drop factor: 2.783 mL/min × 60 gtt/mL = 167 gtt/min. The calculation also shows the 60 cancels: (167/60) × 60 = 167. So the infusion rate is 167 gtt per minute.

6. What is the hourly flow rate for infusing 1.5 L of D5% in 1/5 normal saline over 20 hours?

A. 60 mL/h

B. 70 mL/h

C. 80 mL/h

D. 75 mL/h

Flow rate is simply the total volume to be infused divided by the time over which it's delivered. Here, 1.5 liters equals 1500 milliliters, to be infused over 20 hours. So 1500 mL ÷ 20 h = 75 mL per hour. The specific solution (D5% in 1/5 normal saline) doesn't change this rate; it only describes what's in the bag, not how fast it's delivered.

7. Starting at 0700 hours, half a litre of dextrose 5% is set up to run at 40 mL/h. At what time will the bag be finished?

A. 1830 h

B. 1900 h

C. 1930 h

D. 2000 h

Infusion time = volume to infuse ÷ flow rate. Here, 0.5 liters = 500 mL. At 40 mL/hour, time needed = 500 ÷ 40 = 12.5 hours. Starting at 07:00, add 12 hours to reach 19:00, then add 0.5 hours to reach 19:30. So the bag finishes at 19:30 hours, which is 1930 h.

8. A burette pump must deliver 600 mL of fluid over 3 hours. What is the rate in mL/h?

A. 180 mL/h

B. 190 mL/h

C. 200 mL/h

D. 210 mL/h

Rate is the amount of fluid delivered per unit of time. For a burette pump delivering 600 mL in 3 hours, divide the volume by the time: 600 ÷ 3 = 200. So the rate is 200 mL per hour (200 mL/h).   If you check the other values, 180 mL/h would take about 3.33 hours to deliver 600 mL, 190 mL/h about 3.16 hours, and 210 mL/h about 2.86 hours. Keeping the units in mL per hour makes the correct rate clear.

9. A young male patient is to be given one litre of dextrose 4% in 1/5 normal saline. The infusion pump is set at 80 mL/h. How long will it take to give the litre?

A. 12 hours

B. 11 hours

C. 14 hours

D. 12 hours 30 minutes

The main idea is to use the infusion time formula: time = volume to be infused ÷ flow rate. Here, the total volume is 1 liter, which is 1000 mL, and the pump delivers at 80 mL per hour. So, 1000 ÷ 80 = 12.5 hours. Since 0.5 hour equals 30 minutes, that's 12 hours and 30 minutes. The mixture (dextrose in saline) doesn't change the time—only the total volume and the fixed flow rate determine how long it takes.

10. A patient has an order to infuse 100 mL of D51/2NS with 10 mEq of KCl over 30 minutes. The IV set delivers 10 gtt/mL. What is the correct flow rate in drops per minute (gtt/min), rounded to the nearest whole number?

A. 33 gtt/min

B. 31 gtt/min

C. 44 gtt/min

D. 22 gtt/min

Understanding drops per minute requires converting the total volume to drops and then spreading them over the infusion time. The drip set delivers 10 drops per milliliter, so 100 mL equals 100 × 10 = 1000 drops. These 1000 drops must be given in 30 minutes, so the flow rate is 1000 drops ÷ 30 minutes = 33.3 drops per minute. Rounding to the nearest whole number gives 33 gtt/min.

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://indusioncalc.examzify.com

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