NBRC Registered Respiratory Therapist – Neonatal/Pediatric Specialty (RRT-NPS) 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. Which statement best describes a chloride level of 120 mEq/L in a neonate?

A. Within the normal neonatal range

B. Below the normal neonatal range

C. Above the normal neonatal range

D. Indeterminate

2. What is the target SpO2 for a newborn at 3 minutes of life?

A. 70-75%

B. 65-70%

C. 75-80%

D. 80-85%

3. Which statement best describes the interpretation of an RDI of 6 in a child under 12?

A. Mild

B. Severe

C. Normal

D. Moderate

4. Which pair correctly identifies a type of compliance included in the calculations?

A. Static and dynamic

B. Elastic and vascular

C. Rheological and kinetic

D. Cubic and linear

5. Which ECMO configuration provides support for both pulmonary and cardiac systems?

A. Veno-venous

B. Veno-arterial

C. Arterial-venous

D. Cardiopulmonary bypass

6. Which opioid analgesic is commonly used for severe postoperative analgesia and may be given as alternative to morphine?

A. Fentanyl

B. Meperidine

C. Hydromorphone

D. Morphine

7. Which sweat test result would indicate a need to retest for CF?

A. >60

B. 30-59

C. <30

D. Not tested

8. Treatment for blood type incompatibility is best managed with which intervention?

A. Vitamin K injection

B. RhoGAM injection

C. Oxygen therapy

D. Platelets transfusion

9. Which value would be most directly affected by fluid administration in hypovolemia?

A. CVP

B. MAP

C. PCWP

D. PAP

10. Which maneuver is recommended for a conscious child with severe airway obstruction?

A. Finger sweep

B. Back blows

C. CPR

D. Heimlich maneuver

Answers

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

Explanations

1. Which statement best describes a chloride level of 120 mEq/L in a neonate?

A. Within the normal neonatal range

B. Below the normal neonatal range

C. Above the normal neonatal range

D. Indeterminate

Chloride helps keep charge balance alongside bicarbonate, and neonates have a reference range roughly in the mid to high 90s up to about 110 mEq/L. A chloride level of 120 mEq/L sits above that range, indicating hyperchloremia. This elevation can occur with metabolic processes that increase chloride load—such as loss of bicarbonate with metabolic acidosis or after receiving large amounts of isotonic saline—and it prompts you to check the acid-base status (bicarbonate and the anion gap) and review fluid management. So, this value describes a chloride level that is above the normal neonatal range.

2. What is the target SpO2 for a newborn at 3 minutes of life?

A. 70-75%

B. 65-70%

C. 75-80%

D. 80-85%

SpO2 values rise as the newborn begins breathing air and the lungs become the main source of oxygen. By about three minutes, many healthy term infants have reached roughly the low to mid 70s. A target around 70–75% at this time fits the typical progression of oxygenation during transitional circulation, giving a practical goal that helps ensure adequate oxygen delivery without overshooting into higher, potentially unnecessary oxygen levels. In practice, if SpO2 is below this range, you'd assess and optimize ventilation and consider adjusting oxygen delivery accordingly; if it's above, you'd modulate oxygen to avoid hyperoxia. Remember that individual babies vary, and prematurity or lung conditions can shift these values.

3. Which statement best describes the interpretation of an RDI of 6 in a child under 12?

A. Mild

B. Severe

C. Normal

D. Moderate

RDI is the number of breathing disturbances per hour of sleep, counting events like apneas, hypopneas, and respiratory effort-related arousals. In children, the severity of these events is categorized with specific cutoffs that differ from adults: normal is typically less than 1 event per hour, mild ranges from about 1 to 5 per hour, moderate from about 5 to 10 per hour, and severe is greater than 10 per hour. An RDI of 6 means there are roughly six disturbances per hour, placing it in the moderate range. This is more than normal and more than mild, but not high enough to be labeled severe.

4. Which pair correctly identifies a type of compliance included in the calculations?

A. Static and dynamic

B. Elastic and vascular

C. Rheological and kinetic

D. Cubic and linear

Compliance is about how easily the respiratory system expands in response to pressure. In routine ventilation calculations, two forms are used: static compliance, measured when there is no gas flow and using plateau pressure minus PEEP, which reflects the elastic properties of the lung and chest wall; and dynamic compliance, measured during active flow using peak inspiratory pressure minus PEEP, which reflects both elastic properties and airway resistance. These two together are the types of compliance included in the calculations. The other pairings don't fit this context: elastic and vascular aren't the standard calculation categories for respiratory compliance; rheological and kinetic aren't used in this setting; cubic and linear describe relationships rather than specific compliance types.

5. Which ECMO configuration provides support for both pulmonary and cardiac systems?

A. Veno-venous

B. Veno-arterial

C. Arterial-venous

D. Cardiopulmonary bypass

Venoarterial ECMO provides both cardiac and pulmonary support. Blood is drained from the venous system, oxygenated in the circuit, and returned to the arterial circulation. This delivers oxygenated blood under systemic pressure, effectively taking over part of the heart's pumping workload and maintaining perfusion, while the oxygenator handles gas exchange for the lungs. In contrast, veno-venous ECMO returns blood to the venous system and relies on the heart to circulate it, mainly supporting lung function without providing direct cardiac support. Cardiopulmonary bypass is surgical bypass used intraoperatively rather than a long-term ECMO configuration. So, the configuration that supports both heart and lungs is venoarterial ECMO.

6. Which opioid analgesic is commonly used for severe postoperative analgesia and may be given as alternative to morphine?

A. Fentanyl

B. Meperidine

C. Hydromorphone

D. Morphine

Managing severe postoperative pain often requires a potent opioid that can be reliably titrated to relief without causing excessive hemodynamic or cognitive side effects. Hydromorphone fits this role well as an alternative to morphine because it provides strong analgesia similar to morphine but is generally well tolerated and easier to dose adjust in the postoperative setting. It tends to cause less histamine release than morphine, which can help keep blood pressure stable and reduce itching and flushing in vulnerable patients. This makes it a practical substitute when morphine is not ideal or when a patient's response to morphine is suboptimal. Understanding why other options aren't the default substitute helps reinforce the choice. Meperidine is less favored for postoperative pain due to its problematic metabolite that can accumulate and provoke CNS excitation or seizures, especially with renal impairment or longer use. Fentanyl is indeed a highly potent opioid used for severe postoperative analgesia, but hydromorphone is traditionally viewed as a direct, widely used alternative to morphine when the goal is strong, controllable analgesia with a familiar dosing approach. Morphine remains a standard, so having a reliable alternative like hydromorphone is important in diverse clinical scenarios.

7. Which sweat test result would indicate a need to retest for CF?

A. >60

B. 30-59

C. <30

D. Not tested

Interpreting sweat chloride results for CF hinges on established threshold ranges. A value in the indeterminate zone, 30–59 mmol/L, does not confirm or exclude cystic fibrosis by itself. Because this range can be influenced by testing conditions, technique, age, and other factors, retesting is recommended to confirm CF status. If a repeat test remains in this middle zone or if clinical suspicion remains high, additional testing such as genetic testing or a comprehensive clinical assessment is used to reach a diagnosis. Values above 60 mmol/L are strongly suggestive of CF in the right clinical context, while below 30 makes CF unlikely.

8. Treatment for blood type incompatibility is best managed with which intervention?

A. Vitamin K injection

B. RhoGAM injection

C. Oxygen therapy

D. Platelets transfusion

When a mother and fetus have Rh incompatibility, the goal is to prevent the mother from forming antibodies against the fetal Rh antigen. Rho(D) immune globulin (RhoGAM) is given to the Rh-negative mother to bind any Rh-positive fetal cells in her circulation. This prevents maternal sensitization and, in turn, reduces the risk of hemolytic disease of the newborn in current and future pregnancies. Timing is important: it's administered during pregnancy (commonly around 28 weeks) and after delivery if the baby is Rh-positive, or after events that cause feto-maternal bleeding. Vitamin K protects against bleeding in the newborn, not against Rh antibodies; oxygen therapy and platelet transfusions do not address alloimmunization to Rh.

9. Which value would be most directly affected by fluid administration in hypovolemia?

A. CVP

B. MAP

C. PCWP

D. PAP

The main idea is that adding fluid in hypovolemia directly increases venous return to the heart, boosting preload. Central venous pressure directly reflects right atrial pressure and thus right-sided preload; as you infuse volume, venous return rises and CVP increases promptly. Other pressures can rise as well, but they're influenced by additional factors like cardiac output, left-heart filling, or vascular resistance. Mean arterial pressure depends on both cardiac output and systemic resistance, while left-sided filling pressures (like pulmonary capillary wedge pressure) and pulmonary artery pressures reflect different parts of the circulation and may change more indirectly or later. So, the value most directly and immediately affected by fluid administration in hypovolemia is central venous pressure.

10. Which maneuver is recommended for a conscious child with severe airway obstruction?

A. Finger sweep

B. Back blows

C. CPR

D. Heimlich maneuver

When a conscious child has a severe airway obstruction, you need a maneuver that can rapidly dislodge the object and restore airflow. The Heimlich maneuver (abdominal thrusts) is preferred for a conscious child older than 1 year. The rescuer stands behind the child, wraps arms around the waist, makes a fist with one hand just above the navel, grasps it with the other hand, and delivers quick inward and upward thrusts until the obstruction is expelled or the child coughs and breathes again. Finger sweeps are risky unless you can clearly see and safely grab the object, because sweeping can push the object deeper. Back blows are typically emphasized for infants, not older children. CPR would be used only if the child becomes unresponsive; in that case, start CPR and attempt to clear the airway during resuscitation.

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://nbrcrrtnps.examzify.com

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