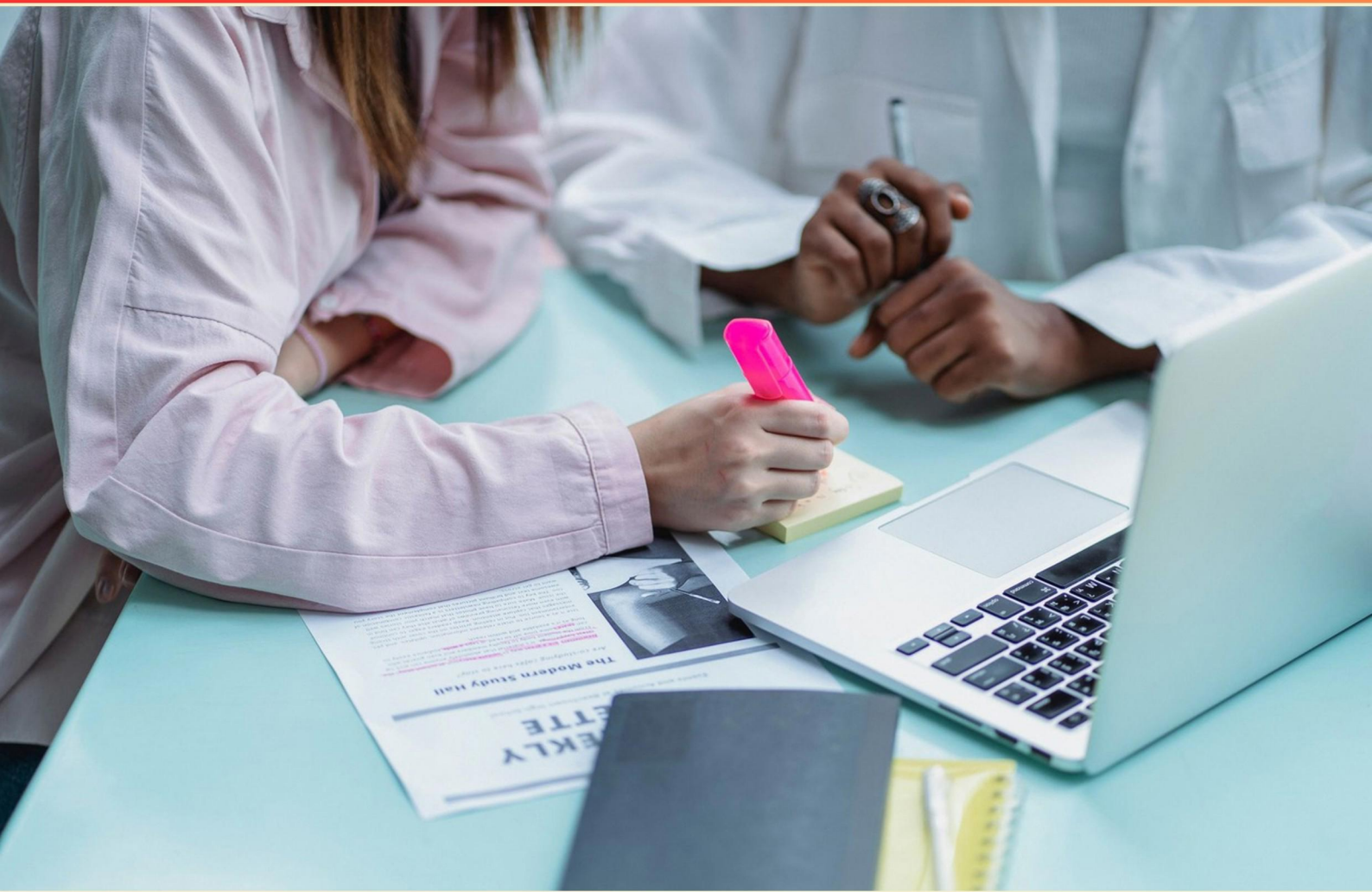


ARIZONA STATE UNIVERSITY (ASU) NUR 426 HEALTH AND ILLNESS CONCEPTS ADVANCED EXAM 1 PRACTICE (SAMPLE) STUDY GUIDE



SAMPLE STUDY GUIDE WITH LIMITED QUESTIONS

VISIT US ONLINE FOR
THE FULL VERSION STUDY GUIDE

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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. Which therapy is used to reduce cerebral edema as part of ICP management?**
 - A. Corticosteroids
 - B. Hyperventilation
 - C. Intravenous antihypertensives
 - D. Hyperosmolar therapy with mannitol or hypertonic saline
- 2. What is the maximum daily dose of acetaminophen to avoid hepatotoxicity?**
 - A. 2 g
 - B. 3 g
 - C. 4 g
 - D. 5 g
- 3. Lactate elevation in sepsis is most strongly associated with what increased risk when levels are at 4 mmol/L or higher?**
 - A. Lower risk of mortality.
 - B. Higher risk of mortality due to severe hypoperfusion.
 - C. No prognostic significance.
 - D. Only indicates the presence of infection.
- 4. When adjusting medication dosing in older adults, what should be closely monitored to ensure safety?**
 - A. Interactions and adverse effects
 - B. Temperature and pulse only
 - C. Vision changes
 - D. Weight alone
- 5. Explain the role of lactic acid measurement and lactate clearance as indicators of tissue perfusion and shock resolution.**
 - A. Serial lactate levels do not correlate with perfusion and have no prognostic value.
 - B. Decreasing lactate over time indicates improving tissue perfusion; persistent elevation suggests ongoing hypoperfusion; lactate clearance is prognostic.
 - C. Lactate clearance is not useful in shock; only initial lactate matters.
 - D. Lactate levels can only be used in lactic acidosis from sepsis.

- 6. In a patient with acute lung injury, what is the first critical step if tension pneumothorax is suspected?**
- A. Perform immediate needle thoracostomy followed by chest tube placement.
 - B. Observe and administer oxygen.
 - C. Place a chest tube without prior needle decompression.
 - D. Administer diuretics.
- 7. Which modality is used to treat both solid tumors and hematologic cancers?**
- A. Chemotherapy
 - B. Surgery
 - C. Radiation
 - D. Immunotherapy
- 8. Which sign suggests thrombocytopenia?**
- A. Frequent headaches
 - B. Petechiae or unusual bruising
 - C. Nausea
 - D. Cough
- 9. Which statement best describes the pathophysiology of leukemia?**
- A. It originates in the hematopoietic system with bone marrow infiltration by abnormal lymphoid or myeloid cells that crowd out healthy cells
 - B. It arises from lymph nodes only
 - C. It is a malignant proliferation arising in epithelial tissue
 - D. It originates in connective tissue
- 10. What protective equipment is recommended during chemotherapy administration?**
- A. Chemo gown, double gloves, eye/face protection, N95
 - B. Regular lab coat and gloves
 - C. No protection needed
 - D. Standard surgical mask

Answers

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

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Explanations

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1. Which therapy is used to reduce cerebral edema as part of ICP management?

- A. Corticosteroids
- B. Hyperventilation
- C. Intravenous antihypertensives

D. Hyperosmolar therapy with mannitol or hypertonic saline

Hyperosmolar therapy with mannitol or hypertonic saline reduces cerebral edema by raising the serum osmolality, which draws water out of swollen brain tissue into the intravascular space and lowers intracranial pressure. Mannitol creates an osmotic gradient and also causes diuresis, while hypertonic saline both increases osmolality and helps preserve or improve cerebral perfusion. This direct effect on brain water makes it a primary approach in ICP management. Other options don't address brain edema as effectively: corticosteroids may help in certain vasogenic edema scenarios but are not routinely beneficial for all ICP etiologies and can cause harm in traumatic brain injury; hyperventilation temporarily lowers ICP through vasoconstriction but doesn't reduce edema long-term and risks ischemia if overused; intravenous antihypertensives manage systemic blood pressure and do not reduce brain edema.

2. What is the maximum daily dose of acetaminophen to avoid hepatotoxicity?

- A. 2 g
- B. 3 g
- C. 4 g**
- D. 5 g

The main idea is understanding why acetaminophen can harm the liver at higher total daily amounts. Most acetaminophen is processed safely, but a small portion is converted by the liver's enzyme system into a toxic metabolite called NAPQI. This metabolite is usually neutralized by glutathione, but if you take more acetaminophen than the liver can safely handle, glutathione stores can be depleted. When NAPQI isn't adequately detoxified, it damages liver cells and can lead to hepatotoxicity. To minimize this risk, the upper limit for a healthy adult is four thousand milligrams (4 g) per day, provided you're not exceeding that total with all acetaminophen-containing products. In people with risk factors like heavy alcohol use or liver disease, the safe daily amount is lower, so clinicians often advise closer to 3 g or less.

3. Lactate elevation in sepsis is most strongly associated with what increased risk when levels are at 4 mmol/L or higher?

- A. Lower risk of mortality.
- B. Higher risk of mortality due to severe hypoperfusion.**
- C. No prognostic significance.
- D. Only indicates the presence of infection.

In sepsis, a lactate level at or above four millimoles per liter signals significant tissue hypoperfusion and is linked to a higher risk of death. When tissues don't get enough oxygen, cells shift to anaerobic metabolism, producing more lactate. This rise reflects how severely perfused organs are and how trapped the patient is in a shock state. Because it summarizes the balance between oxygen delivery and consumption, a high lactate level indicates a greater physiologic disturbance and worse prognosis, guiding clinicians to urgent resuscitation and close monitoring. It's more than just indicating infection; it provides prognostic information about the body's perfusion status and overall severity. Lactate levels are not associated with a lower mortality risk, nor do they have no prognostic significance, and they aren't simply a marker of infection without perfusion context.

4. When adjusting medication dosing in older adults, what should be closely monitored to ensure safety?

A. Interactions and adverse effects

B. Temperature and pulse only

C. Vision changes

D. Weight alone

When adjusting medication dosing in older adults, closely monitoring drug interactions and adverse effects is essential. Aging alters how drugs are processed and how they affect the body, increasing the likelihood that new or increased doses will interact with other medications and produce meaningful, even dangerous, side effects. With polypharmacy, a wide array of potential interactions can arise, and older patients may be more sensitive to side effects such as confusion, sedation, dizziness, electrolyte disturbances, or bleeding risks. Reviewing the full medication list at every dose change helps identify problematic combinations (for example, anticoagulants with NSAIDs or other antiplatelet agents, or multiple CNS depressants) and early signs of harm (new confusion, falls, urinary retention, GI bleeding, or electrolyte issues). Relying solely on vitals like temperature and pulse misses these critical safety signals. Vision changes or weight shifts alone don't adequately reflect potential interactions or adverse events. Thus, monitoring for interactions and adverse effects provides the most comprehensive safety net when adjusting dosing in older adults.

5. Explain the role of lactic acid measurement and lactate clearance as indicators of tissue perfusion and shock resolution.

A. Serial lactate levels do not correlate with perfusion and have no prognostic value.

B. Decreasing lactate over time indicates improving tissue perfusion; persistent elevation suggests ongoing hypoperfusion; lactate clearance is prognostic.

C. Lactate clearance is not useful in shock; only initial lactate matters.

D. Lactate levels can only be used in lactic acidosis from sepsis.

Tracking lactate levels over time shows how well tissues are being perfused and whether shock is resolving. Lactic acid is produced when cells rely on anaerobic metabolism due to reduced oxygen delivery, so an elevated lactate signals tissue hypoperfusion. As perfusion improves and oxygen delivery catches up with demand, lactate production decreases and existing lactate is cleared by the liver and kidneys, so a falling lactate level is a sign of recovery. Serial measurements matter because the trend reveals the patient's response to resuscitation. A decreasing lactate over time indicates improving tissue perfusion and metabolic balance; a lactate that stays high or rises suggests ongoing hypoperfusion and the need to reassess and adjust therapy. Lactate clearance, meaning the rate at which lactate declines, provides prognostic information—faster clearance is generally associated with better outcomes, while poor clearance is associated with higher risk. Other statements fall short because a single lactate value doesn't capture the dynamic response to treatment, and lactate elevation isn't limited to sepsis—it can occur in many forms of shock and hypoperfusion.

6. In a patient with acute lung injury, what is the first critical step if tension pneumothorax is suspected?

- A. Perform immediate needle thoracostomy followed by chest tube placement.
- B. Observe and administer oxygen.
- C. Place a chest tube without prior needle decompression.
- D. Administer diuretics.

When a tension pneumothorax is suspected, the priority is to rapidly relieve the intrapleural pressure so venous return and cardiac output can recover. The best first step is immediate needle thoracostomy to decompress the chest and evacuate the trapped air. This quick intervention buys time and stabilizes the patient, after which a chest tube should be placed for definitive drainage and to re-expand the lung. Waiting and observing, giving oxygen alone, or using diuretics do not address the life-threatening pressure buildup. A chest tube may still be placed, but it should follow promptly after decompression to provide immediate relief of the tension.

7. Which modality is used to treat both solid tumors and hematologic cancers?

- A. Chemotherapy
- B. Surgery
- C. Radiation
- D. Immunotherapy

Chemotherapy is the modality that treats both solid tumors and hematologic cancers because it works systemically, not just at a single site. It targets rapidly dividing cells throughout the body, so it can reach cancer cells embedded in a solid tumor as well as malignant cells circulating in the bloodstream or residing in bone marrow, which is common in leukemias and lymphomas. This ability to address disseminated disease and micrometastases makes chemotherapy applicable to both cancer types, whereas surgery is mainly for removing localized masses and radiation is primarily localized to a specific region. Immunotherapy is increasingly used for various cancers but is not universally effective across all solid and hematologic cancers, whereas chemotherapy remains a standard approach for a broad range of both.

8. Which sign suggests thrombocytopenia?

- A. Frequent headaches
- B. Petechiae or unusual bruising
- C. Nausea
- D. Cough

Low platelets hinder the formation of the platelet plug, so bleeding into the skin becomes apparent when platelet counts are reduced. Petechiae are tiny non-blanching spots from capillary bleeding, and unusual bruising occurs with minimal trauma because the body can't form a stable platelet plug. These mucocutaneous signs directly reflect a platelet problem, making them the best clue for thrombocytopenia. In contrast, headaches, nausea, or cough are nonspecific symptoms that don't point to a platelet deficiency.

9. Which statement best describes the pathophysiology of leukemia?

- A. It originates in the hematopoietic system with bone marrow infiltration by abnormal lymphoid or myeloid cells that crowd out healthy cells**
- B. It arises from lymph nodes only
- C. It is a malignant proliferation arising in epithelial tissue
- D. It originates in connective tissue

Leukemia is a cancer of the blood-forming tissues, starting in the hematopoietic system. It involves malignant clones of lymphoid or myeloid cells that proliferate in the bone marrow, expand into the marrow space, and often spill into the bloodstream. This uncontrolled growth crowds out normal developing blood cells, leading to reduced production of healthy red cells, white cells, and platelets. That disruption of normal hematopoiesis explains the fatigue, infections, and bleeding commonly seen with leukemia. The disease is fundamentally about neoplastic activity in bone marrow and the hematopoietic lineage, not confined to lymph nodes, epithelial tissue, or connective tissue.

10. What protective equipment is recommended during chemotherapy administration?

- A. Chemo gown, double gloves, eye/face protection, N95**
- B. Regular lab coat and gloves
- C. No protection needed
- D. Standard surgical mask

Handling cytotoxic chemotherapy requires protecting skin, eyes, and the airway from exposure. The recommended protective equipment during administration includes an impermeable chemo gown, double gloves (outer and inner), eye or face protection (goggles or face shield) for splash protection, and a respirator such as an N95 when there is potential for inhalation of aerosols or powders. The gown and gloves create a barrier to prevent drug contact with the skin; wearing two gloves adds a backup if the outer one is compromised and supports safe removal. Eye and face protection guards mucous membranes from splashes, and the N95 helps reduce inhalation exposure if aerosols or powders could become airborne. Inadequate protection, like a regular lab coat and gloves, does not adequately prevent permeation; a standard surgical mask only protects the nose and mouth and not the eyes or skin, nor does it block splashes or permeation.

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://asu-nur426exam1.examzify.com>

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

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