

VTNE Laboratory Procedures 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

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- 1. In a spun hematocrit tube, the buffy coat lies between which two layers?**
 - A. Plasma and buffy coat**
 - B. RBCs and Plasma**
 - C. Buffy coat and RBCs**
 - D. Plasma and RBCs**

- 2. Glycosuria exists:**
 - A. When blood glucose levels exceed the renal threshold for absorption of glucose**
 - B. When blood glucose levels are lower than the renal threshold for absorption of glucose**
 - C. When urine glucose levels are lower than the renal threshold for absorption of glucose**
 - D. When urine glucose levels are higher than the serum threshold for absorption of glucose**

- 3. What test on the urine dipstick is the least useful in animals?**
 - A. Ketones**
 - B. Glucose**
 - C. Protein**
 - D. Urobilinogen**

- 4. Which term indicates an abnormally high lymphocyte count?**
 - A. Lymphocytosis**
 - B. Leukosis**
 - C. Lymphocytopenia**
 - D. Lymphosarcoma**

- 5. The parasite whose larvae encyst in the subcutaneous tissue of rabbits is which species?**
 - A. Gasterophilus species**
 - B. Hypoderma species**
 - C. Oestrus species**
 - D. Cuterebra species**

- 6. Which of the following is not a simple stain?**
- A. Gram stain**
 - B. Methylene blue**
 - C. Crystal violet**
 - D. Safranin**
- 7. Which organism is frequently recovered from the ears of dogs with chronic otitis externa?**
- A. Malassezia sp.**
 - B. Candida sp.**
 - C. Cryptococcus sp.**
 - D. Microsporum sp.**
- 8. Stress and epinephrine release in cats might cause an increase in which parameter?**
- A. BUN**
 - B. Total protein**
 - C. ALT**
 - D. Glucose**
- 9. Elevated bilirubin levels most commonly indicate dysfunction of which organ?**
- A. Heart**
 - B. Liver**
 - C. Lungs**
 - D. Spleen**
- 10. Aged urine samples left at room temperature and exposed to UV light may cause a false negative result in which one of the following biochemical tests?**
- A. Ketones**
 - B. Protein**
 - C. Glucose**
 - D. Bilirubin**

Answers

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

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Explanations

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1. In a spun hematocrit tube, the buffy coat lies between which two layers?

- A. Plasma and buffy coat**
- B. RBCs and Plasma**
- C. Buffy coat and RBCs**
- D. Plasma and RBCs**

When a hematocrit tube is spun, components separate by density into three layers: plasma on top, a middle buffy coat, and red blood cells at the bottom. The buffy coat is the layer of white blood cells and platelets that sits between the top plasma and the bottom red blood cells. So the region where the buffy coat lies is between the plasma layer and the RBC layer. The buffy coat is usually a thin layer because the white cells and platelets are less abundant than red cells.

2. Glycosuria exists:

- A. When blood glucose levels exceed the renal threshold for absorption of glucose**
- B. When blood glucose levels are lower than the renal threshold for absorption of glucose**
- C. When urine glucose levels are lower than the renal threshold for absorption of glucose**
- D. When urine glucose levels are higher than the serum threshold for absorption of glucose**

Glycosuria occurs when the amount of glucose in the blood exceeds what the kidneys can reclaim. Glucose is filtered by the kidneys and normally reabsorbed in the proximal tubule up to a maximum rate. When blood glucose rises high enough that the filtered load surpasses this reabsorptive capacity (the renal threshold for glucose), the extra glucose spills into the urine. That's why you see glucose in the urine in conditions like uncontrolled diabetes or with tubular transport problems. If blood glucose stays below that threshold, all filtered glucose is reabsorbed and urine glucose remains absent. The idea of urine glucose being lower than a threshold or of comparing urine thresholds to serum thresholds isn't how glycosuria is determined, since the critical point is the blood concentration exceeding the kidney's reabsorptive capacity.

3. What test on the urine dipstick is the least useful in animals?

- A. Ketones**
- B. Glucose**
- C. Protein**
- D. Urobilinogen**

Urobilinogen on a urine dipstick is the least useful in animals because its results are highly variable and not reliably diagnostic across species. Urobilinogen is formed from bilirubin by gut bacteria, absorbed back into the bloodstream, and then excreted in urine. In animals, factors such as differences in intestinal flora, diet, sample handling, and biliary dynamics can all skew the dipstick reading, making it a poor stand-alone indicator of liver disease or hemolysis. In contrast, ketones, glucose, and protein on a dipstick provide more direct clinical information: ketones point to negative energy balance or ketoacidosis, glucose suggests glucosuria from significant hyperglycemia, and proteinuria can indicate kidney disease. Because urobilinogen testing offers limited and inconsistent clinical value in veterinary patients, it's considered the least useful of the four.

4. Which term indicates an abnormally high lymphocyte count?

- A. Lymphocytosis**
- B. Leukosis**
- C. Lymphocytopenia**
- D. Lymphosarcoma**

An abnormally high lymphocyte count is called lymphocytosis. Lymphocytes are a type of white blood cell crucial for immune defense, especially against viral infections and certain chronic conditions. When their numbers rise above the normal range, we describe it as lymphocytosis. The opposite situation is lymphocytopenia, where lymphocyte numbers are below normal. Lymphosarcoma refers to a malignant tumor of lymphoid tissue, not a description of a cell count, while leukosis is a disease state involving white blood cell proliferation but does not specifically define an elevated lymphocyte count. So, lymphocytosis is the term that correctly indicates an increased lymphocyte count.

5. The parasite whose larvae encyst in the subcutaneous tissue of rabbits is which species?

- A. Gasterophilus species**
- B. Hypoderma species**
- C. Oestrus species**
- D. Cuterebra species**

Focus on where the larvae grow and which hosts they typically infest. Cuterebra, the rodent botflies, have larvae that encyst in the subcutaneous tissue of small mammals like rabbits, producing characteristic warbles under the skin. This subcutaneous encystment in rabbits is a classic finding for Cuterebra. In contrast, Gasterophilus larvae inhabit the stomachs of horses, Oestrus ovis larvae develop in the nasal passages of sheep, and Hypoderma larvae migrate in the subcutaneous tissue of cattle. The tissue and host specificity of these other species don't match the rabbit's subcutaneous encystment, so Cuterebra is the correct choice.

6. Which of the following is not a simple stain?

- A. Gram stain**
- B. Methylene blue**
- C. Crystal violet**
- D. Safranin**

Staining methods can be simple or differential. In a simple stain, you apply a single dye to fixed cells, producing a uniform color that helps you see basic features like shape and arrangement. Dyes such as methylene blue, crystal violet, and safranin are typical simple stains because one application colors the cells all the same way, giving straightforward morphology without differentiating between types of cells. The Gram stain, in contrast, is a differential technique. It uses a sequence of steps and multiple reagents to separate bacteria based on their cell wall properties, yielding two different colors: Gram-positive organisms remain purple, while Gram-negative organisms take up the counterstain and appear pink. Because it relies on several reagents and stages to create a differential outcome, it is not a simple stain.

7. Which organism is frequently recovered from the ears of dogs with chronic otitis externa?

- A. Malassezia sp.**
- B. Candida sp.**
- C. Cryptococcus sp.**
- D. Microsporum sp.**

Chronic otitis externa in dogs is often driven by overgrowth of a yeast that normally lives in the ear canal. *Malassezia pachydermatis* is a lipophilic yeast commonly found on canine skin and ears, and it thrives in the warm, moist environment created by inflammation. When this overgrowth occurs, it contributes to discharge, odor, and itching, so it is frequently recovered from affected ears. Among the other organisms listed, *Candida* can be seen but is less commonly the primary culprit in chronic ear infections; *Cryptococcus* typically involves systemic or distant sites rather than the ear; *Microsporum* is a dermatophyte more associated with skin infections like ringworm rather than chronic otitis externa. Thus, *Malassezia* is the most consistent and frequent finding in these cases.

8. Stress and epinephrine release in cats might cause an increase in which parameter?

- A. BUN**
- B. Total protein**
- C. ALT**
- D. Glucose**

Acute stress triggers a surge of epinephrine that raises blood glucose. Epinephrine acts on the liver to rapidly convert stored glycogen into glucose (glycogenolysis) and also promotes the production of new glucose (gluconeogenesis). It also dampens insulin release, reducing glucose uptake by tissues, so the amount of glucose in the bloodstream increases quickly. This rapid, transient hyperglycemia is a classic metabolic response to sympathetic stimulation in cats. The other parameters don't rise in this immediate, adrenaline-driven way. BUN can be influenced by hydration and kidney function, ALT rises with liver injury, and total protein tends to stay relatively stable in the short term.

9. Elevated bilirubin levels most commonly indicate dysfunction of which organ?

- A. Heart
- B. Liver**
- C. Lungs
- D. Spleen

Bilirubin is a waste product from the breakdown of red blood cells that the liver handles by conjugating and excreting into bile. When the liver is damaged or bile flow is blocked, this processing fails and bilirubin builds up in the blood, causing elevated levels. Since the liver is the key organ for bilirubin metabolism, elevated bilirubin most commonly signals liver dysfunction. The other organs don't perform bilirubin conjugation or biliary excretion—while the spleen can influence bilirubin via hemolysis, that's less common, and the heart or lungs aren't directly involved in bilirubin processing.

10. Aged urine samples left at room temperature and exposed to UV light may cause a false negative result in which one of the following biochemical tests?

- A. Ketones
- B. Protein
- C. Glucose
- D. Bilirubin**

Bilirubin in urine is photosensitive, so it degrades when exposed to light, especially UV, and as the sample ages at room temperature. The urine bilirubin test relies on a color-forming reaction (diazo reaction) that detects intact bilirubin. When bilirubin photodegrades, the color development weakens or disappears, leading to a false negative—even if bilirubin is present. The other tests use chemistry that isn't as rapidly disrupted by light exposure or aging, so they're less likely to give false negatives under these conditions. To prevent this, protect urine samples from light and test promptly or refrigerate if delays are expected.

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://vtnelabprocedures.examzify.com>

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

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