

# Success! In Clinical Laboratory Science - Parasitology 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. Which genus is identified by eggs with thick shells and radial striations, often with hooklets?**
  - A. Taenia sp**
  - B. Hymenolepis nana**
  - C. Hymenolepis diminuta**
  - D. Schistosoma japonicum**
  
- 2. Pneumonia-like complications due to larval migration through the lungs are most associated with infection by which organism?**
  - A. Hookworm**
  - B. Schistosoma japonicum**
  - C. Strongyloides stercoralis**
  - D. Ascaris lumbricoides**
  
- 3. Which parasite is commonly acquired from eating raw fish and produces eggs with an operculum and a large size?**
  - A. Clonorchis sinensis**
  - B. Paragonimus westermani**
  - C. Fasciola hepatica**
  - D. Diphylobothrium latum**
  
- 4. Which feature identifies Iodamoeba bütschlii cysts?**
  - A. Blunt chromatoidal bars**
  - B. Four nuclei with large karyosomes**
  - C. Many ingested bacteria**
  - D. A well-defined glycogen mass**
  
- 5. Which organism is the causative agent of Chagas disease and is transmitted by reduviid bugs?**
  - A. Trypanosoma brucei**
  - B. Trypanosoma cruzi**
  - C. Leishmania braziliensis**
  - D. Dracunculus medinensis**

- 6. Which stage of *Trichuris trichiura* is infective for humans?**
- A. Proglottid**
  - B. Rhabditiform larva**
  - C. Filariform larva**
  - D. Embryonated egg**
- 7. An egg with four cells in the developing embryo within a thin-shelled egg is most consistent with which parasite?**
- A. *Strongyloides stercoralis***
  - B. *Trichuris trichiura***
  - C. Hookworm**
  - D. *Enterobius vermicularis***
- 8. A traveler who recently returned from Africa experiences recurring fevers; a peripheral smear at 1000x magnification shows a malaria parasite. Which *Plasmodium* species is most likely?**
- A. *Plasmodium knowlesi***
  - B. *Plasmodium vivax***
  - C. *Plasmodium malariae***
  - D. *Plasmodium ovale***
- 9. An 8-year-old child from Central America presents with pallor and dyspnea; a peripheral blood smear shows an extracellular parasite with an anterior flagellum and a prominent nucleus. Which organism is most likely?**
- A. *Leishmania braziliensis***
  - B. *Trypanosoma cruzi***
  - C. *Dracunculus medinensis***
  - D. *Trypanosoma brucei***
- 10. Hematuria is a typical sign associated with infection by which parasite?**
- A. *Trypanosoma cruzi***
  - B. *Trichinella spiralis***
  - C. *Trichomonas vaginalis***
  - D. *Schistosoma haematobium***

## Answers

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

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## **Explanations**

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**1. Which genus is identified by eggs with thick shells and radial striations, often with hooklets?**

**A. Taenia sp**

**B. Hymenolepis nana**

**C. Hymenolepis diminuta**

**D. Schistosoma japonicum**

Eggs that have a thick outer shell with radial striations and contain an oncosphere that bears hooklets are classic for Taenia species. The thick, striated shell helps distinguish these eggs from others, and the visible hooklets on the embryo inside are a distinctive feature of Taenia eggs. This combination of shell texture and the armed oncosphere is not typical of Hymenolepis eggs, which tend to be smaller and may show polar filaments rather than pronounced radial striations, nor of Hymenolepis diminuta eggs, which do not display that same radial shell pattern. Schistosoma japonicum eggs have a completely different morphology, including a lateral spine, and lack the thick, striated shell with an armed oncosphere. Therefore, the described eggs point to Taenia.

**2. Pneumonia-like complications due to larval migration through the lungs are most associated with infection by which organism?**

**A. Hookworm**

**B. Schistosoma japonicum**

**C. Strongyloides stercoralis**

**D. Ascaris lumbricoides**

Pneumonia-like symptoms from larval migration through the lungs occur because some nematode larvae travel via the bloodstream to the lungs, causing transient pneumonitis with eosinophilia. The classic organism associated with this pulmonary migration is Ascaris lumbricoides. As the larvae pass through the lungs, patients may develop cough, wheezing, chest discomfort, and transient infiltrates on imaging (Loeffler's syndrome); after a short period, the larvae are swallowed back into the digestive tract and mature in the small intestine. While hookworms and Strongyloides stercoralis can also cause similar lung-stage symptoms during their migration, the association is most strongly and conventionally linked to Ascaris lumbricoides. Schistosoma japonicum mainly causes hepatic and intestinal disease, with pulmonary involvement not classically tied to larval migration through the lungs. So, the pneumonia-like pulmonary phase during larval migration is best linked to Ascaris lumbricoides.

**3. Which parasite is commonly acquired from eating raw fish and produces eggs with an operculum and a large size?**

- A. Clonorchis sinensis**
- B. Paragonimus westermani**
- C. Fasciola hepatica**
- D. Diphylobothrium latum**

A key clue is a tapeworm acquired from eating raw fish, with eggs that are operculated and notably large. *Diphylobothrium latum* fits this pattern: humans acquire it by consuming raw or undercooked freshwater fish (such as certain pike, perch, or salmon depending on region). The eggs of this parasite are operculated, and, among the human helminths, the eggs and the worm itself are relatively large, reflecting the characteristic size of this fish-borne tapeworm. The parasite can grow to several meters in length, and infection may lead to vitamin B12 deficiency and anemia, adding clinical context that often accompanies this diagnosis. Other options involve organisms associated with fish or other foods, but their eggs are smaller or their transmission is linked to different vehicles (for example, certain lung or liver flukes or ingestion of aquatic plants or crustaceans), so they do not align as well with the combination of raw fish transmission and large, operculated eggs.

**4. Which feature identifies *Iodamoeba bütschlii* cysts?**

- A. Blunt chromatoidal bars**
- B. Four nuclei with large karyosomes**
- C. Many ingested bacteria**
- D. A well-defined glycogen mass**

*Iodamoeba bütschlii* cysts are best identified by a large, well-defined glycogen mass inside the cyst. This glycogen body is a distinctive feature that stains with iodine, giving the cyst a characteristic appearance and helping separate this species from others that may have multiple nuclei or different internal contents. The cysts typically show a single nucleus, and the prominent glycogen mass dominates the interior, which is not a trait shared by cysts with four nuclei or with numerous ingested bacteria. Chromatoidal bars and multiple nuclei are features of other amoebic cysts, so they aren't the reliable identifiers for *Iodamoeba bütschlii*.

5. Which organism is the causative agent of Chagas disease and is transmitted by reduviid bugs?

- A. *Trypanosoma brucei*
- B. Trypanosoma cruzi**
- C. *Leishmania braziliensis*
- D. *Dracunculus medinensis*

Chagas disease is caused by a flagellated protozoan parasite, *Trypanosoma cruzi*, which is carried by triatomine bugs, commonly called reduviid or kissing bugs, found in the Americas. Transmission happens when these bugs feed and then defecate; the parasite in the feces enters the human host through the bite wound or mucous membranes, initiating infection. Inside the body, the parasite invades cells and replicates, leading to the disease's acute and chronic phases. Among the options, this organism is the one linked to Chagas disease and the reduviid bug vector. The other organisms are associated with different diseases and vectors: *Trypanosoma brucei* causes African sleeping sickness via tsetse flies; *Leishmania braziliensis* causes leishmaniasis via sandflies; *Dracunculus medinensis* (Guinea worm) is contracted from drinking water containing infected copepods.

6. Which stage of *Trichuris trichiura* is infective for humans?

- A. Proglottid
- B. Rhabditiform larva
- C. Filariform larva
- D. Embryonated egg**

In this parasite, transmission begins with the environment. The eggs are shed in feces as unembryonated, and they must develop in soil to become embryonated eggs containing the infective larva. Humans ingest these embryonated eggs, and the larva then hatches and proceeds to establish infection in the cecum. The embryonated egg is the infectious form because only after embryonation does the egg gain the ability to initiate infection. Other forms mentioned belong to different organisms or life stages that aren't responsible for initiating whipworm infection.

7. An egg with four cells in the developing embryo within a thin-shelled egg is most consistent with which parasite?

- A. *Strongyloides stercoralis*
- B. *Trichuris trichiura*
- C. Hookworm**
- D. *Enterobius vermicularis*

Eggs that are thin-shelled and contain a developing embryo at the four-cell stage point to hookworm. Hookworm eggs in stool are oval with a delicate, translucent shell, and early embryonation often shows a 4-cell cleavage before the larva forms. This distinguishes them from other common intestinal nematode eggs: *Trichuris* eggs have thick shells with polar plugs; *Enterobius* eggs are thin-walled and typically unembryonated when first detected and have a flattened side; *Strongyloides* usually presents larvae (rhabditiform) rather than a clearly visible four-cell embryo inside an egg. So the described egg pattern best matches hookworm.

**8. A traveler who recently returned from Africa experiences recurring fevers; a peripheral smear at 1000x magnification shows a malaria parasite. Which Plasmodium species is most likely?**

**A. Plasmodium knowlesi**

**B. Plasmodium vivax**

**C. Plasmodium malariae**

**D. Plasmodium ovale**

Relapsing malaria is driven by dormant liver forms called hypnozoites that can reactivate after the initial infection, causing recurrent febrile episodes. *Plasmodium vivax* and *Plasmodium ovale* are the species known to form these hypnozoites, which explains why fevers can recur in a traveler who recently returned from Africa. Among the two, *vivax* is the more commonly encountered cause of relapsing malaria in many settings, making it the best match for a traveler with recurring fevers and a blood smear demonstrating malaria parasites. In contrast, *malariae* tends to cause a quartan fever pattern and does not form hypnozoites, *falciparum* typically presents with severe disease and does not classically relapse in the same way, and *knowlesi* is a Southeast Asian zoonosis. Thus, the recurring fever pattern points toward *vivax*.

**9. An 8-year-old child from Central America presents with pallor and dyspnea; a peripheral blood smear shows an extracellular parasite with an anterior flagellum and a prominent nucleus. Which organism is most likely?**

**A. Leishmania braziliensis**

**B. Trypanosoma cruzi**

**C. Dracunculus medinensis**

**D. Trypanosoma brucei**

This question tests recognizing a bloodstream flagellate consistent with a *Trypanosoma* species and tying it to the regional parasite likely to be encountered. An extracellular parasite seen on a peripheral smear with an anterior flagellum and a prominent nucleus matches the bloodstream trypomastigote form of *Trypanosoma cruzi*. In Central America, *T. cruzi* causes Chagas disease, and pallor with dyspnea can reflect anemia or cardiac involvement seen in Chagas. The parasite is transmitted by triatomine bugs (kissing bugs), which bite and defecate, allowing the parasite to enter through the bite wound. By contrast, *Trypanosoma brucei* causes African sleeping sickness in sub-Saharan Africa; *Leishmania braziliensis* tends to present with intracellular amastigotes in macrophages rather than extracellular blood forms; and *Dracunculus medinensis* is a skin-dwelling nematode, not a blood parasite.

**10. Hematuria is a typical sign associated with infection by which parasite?**

- A. Trypanosoma cruzi**
- B. Trichinella spiralis**
- C. Trichomonas vaginalis**

**D. Schistosoma haematobium**

Hematuria is most characteristic of urinary schistosomiasis caused by *Schistosoma haematobium*. The adult worms reside in the pelvic venous plexuses near the bladder and lay eggs that become lodged in the bladder wall. This egg deposition triggers a local granulomatous inflammatory response, producing irritation and bleeding into the urine, often appearing as terminal or intermittent blood in the voided urine. Chronic infection can lead to bladder wall damage, fibrosis, and an increased risk of bladder cancer. The other parasites listed do not typically produce this urinary bleeding pattern. For example, *Trypanosoma cruzi* mainly causes cardiomyopathy and digestive tract problems; *Trichinella spiralis* causes muscle inflammation after eating undercooked meat; *Trichomonas vaginalis* causes vaginitis or urethritis with discharge and irritation rather than hematuria.

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## 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](mailto:hello@examzify.com).**

**Or visit your dedicated course page for more study tools and resources:**

**<https://sucessinclinicallabparasitology.examzify.com>**

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

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