

ANTI-INFECTIVE MEDICATIONS PRACTICE TEST (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. What is the recommended prophylaxis for dental procedures in patients with prosthetic heart valves?**
 - A. Amoxicillin 2 g orally before the procedure
 - B. Clindamycin 600 mg orally before the procedure
 - C. Azithromycin 500 mg orally before the procedure
 - D. Doxycycline 100 mg orally before the procedure
- 2. What is the mechanism of action of vancomycin?**
 - A. Inhibits DNA replication
 - B. Inhibits protein synthesis
 - C. Inhibits cell wall synthesis
 - D. Inhibits RNA transcription
- 3. Which practice is an example of antibiotic misuse that can contribute to resistance?**
 - A. Prescribed for viral infections
 - B. Taking antibiotics 'just in case'
 - C. Skipping doses
 - D. Stopping early when feeling better
- 4. In 2013, what percentage of antibiotic prescriptions were for diseases that antibiotics can't treat?**
 - A. 25%
 - B. 15%
 - C. 40%
 - D. 60%
- 5. What is the recommended empiric therapy for coinfection with gonorrhea and chlamydia in adults?**
 - A. Ceftriaxone plus doxycycline (or azithromycin if doxycycline contraindicated)
 - B. Penicillin V alone
 - C. Azithromycin monotherapy
 - D. Doxycycline monotherapy

- 6. The material identifies HIV as:**
- A. A retrovirus
 - B. A bacterium
 - C. A fungus
 - D. A prion
- 7. Which antibiotic is most associated with increasing risk of *Clostridioides difficile* infection, and what stewardship practice helps reduce this risk?**
- A. Clindamycin; stewardship to use narrow-spectrum agents and avoid unnecessary antibiotics
 - B. Fluoroquinolones; stewardship to de-escalate therapy promptly
 - C. Amoxicillin; stewardship to limit duration
 - D. Metronidazole; stewardship to avoid unnecessary combinations
- 8. Which agents are first-line for treating *Chlamydia trachomatis* and *Mycoplasma genitalium* infections in adults?**
- A. Ciprofloxacin or levofloxacin.
 - B. Azithromycin or doxycycline.
 - C. Amoxicillin or cephalexin.
 - D. Clindamycin or metronidazole.
- 9. Azole antifungals carry a risk of hepatotoxicity; what monitoring is recommended?**
- A. Nephrotoxicity; monitor creatinine.
 - B. Ototoxicity; monitor hearing.
 - C. Hepatotoxicity; monitor LFTs.
 - D. QT prolongation; monitor ECG.
- 10. Which organisms are commonly involved in opportunistic infections?**
- A. *Clostridium difficile*, *Candida albicans*
 - B. *Staphylococcus aureus*, *Streptococcus pneumoniae*
 - C. *Escherichia coli*, *Klebsiella pneumoniae*
 - D. *Pseudomonas aeruginosa*, *Mycobacterium tuberculosis*

Answers

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

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Explanations

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1. What is the recommended prophylaxis for dental procedures in patients with prosthetic heart valves?

- A. Amoxicillin 2 g orally before the procedure**
- B. Clindamycin 600 mg orally before the procedure
- C. Azithromycin 500 mg orally before the procedure
- D. Doxycycline 100 mg orally before the procedure

Preventing infective endocarditis during dental work relies on antibiotic protection for those at highest risk, such as people with prosthetic heart valves. The best choice is amoxicillin 2 g taken by mouth about 30 to 60 minutes before the procedure. This dose provides reliable serum levels quickly to blunt the transient bacteremia that can seed a prosthetic valve. Amoxicillin is favored for its good absorption, effectiveness against common oral bacteria, and convenient single pre-procedure dose. If a patient cannot take penicillin or has a true penicillin allergy, alternatives include clindamycin 600 mg, or azithromycin or clarithromycin 500 mg. Doxycycline 100 mg can be used in some allergy scenarios. The other options are suitable alternatives only when penicillin cannot be used, but the standard first-line prophylaxis for a patient with a prosthetic heart valve is amoxicillin.

2. What is the mechanism of action of vancomycin?

- A. Inhibits DNA replication
- B. Inhibits protein synthesis
- C. Inhibits cell wall synthesis**
- D. Inhibits RNA transcription

Vancomycin works by binding to the terminal D-Ala-D-Ala dipeptide of the peptidoglycan precursors used to build the bacterial cell wall. This blocks the enzymes that assemble and cross-link the wall (the transglycosylase and related steps), so the cell wall cannot be formed properly. Without a sturdy wall, the bacteria, especially Gram-positive ones, cannot maintain integrity and die as they attempt to grow or divide. This action is different from agents that inhibit DNA replication, protein synthesis, or RNA transcription, which target nucleic acids or ribosomes rather than the cell wall. Vancomycin is most effective against Gram-positive organisms and is less active against Gram-negatives due to permeability barriers; resistance can occur when the D-Ala-D-Ala terminus is altered to D-Ala-D-Lac, reducing vancomycin binding.

3. Which practice is an example of antibiotic misuse that can contribute to resistance?

- A. Prescribed for viral infections**
- B. Taking antibiotics 'just in case'
- C. Skipping doses
- D. Stopping early when feeling better

Misuse occurs when antibiotics are used inappropriately, such as prescribing them for infections caused by viruses. Antibiotics target bacteria, not viruses, so there is no benefit to the patient. Giving antibiotics for a viral infection only exposes bacteria in the body to the drug, creating selective pressure that favors resistant strains and makes future infections harder to treat. This is the classic example of misuse that feeds resistance. Other risky behaviors, like taking antibiotics "just in case" or skipping or stopping doses early, also promote resistance by exposing bacteria to suboptimal levels or unnecessary exposure, but prescribing for a viral infection is the clearest illustration of misuse.

4. In 2013, what percentage of antibiotic prescriptions were for diseases that antibiotics can't treat?

- A. 25%
- B. 15%
- C. 40%
- D. 60%

Antibiotics only work against bacteria; they don't treat viral infections like colds, flu, or many bronchitis cases. In 2013, about 25% of antibiotic prescriptions were written for conditions that antibiotics can't treat, highlighting a substantial amount of unnecessary or inappropriate prescribing. This reflects challenges like diagnostic uncertainty and patient expectations, underscoring the need for antibiotic stewardship to ensure these drugs are used only when a bacterial infection is likely. The other percentages would either understate or overstate the issue compared with what was observed that year.

5. What is the recommended empiric therapy for coinfection with gonorrhea and chlamydia in adults?

- A. Ceftriaxone plus doxycycline (or azithromycin if doxycycline contraindicated)
- B. Penicillin V alone
- C. Azithromycin monotherapy
- D. Doxycycline monotherapy

*When coinfection with gonorrhea and chlamydia is suspected, you treat for both infections at the same time. Gonorrhea is best covered with ceftriaxone, a cephalosporin that remains effective against *Neisseria gonorrhoeae*, while chlamydia is targeted with doxycycline. Therefore, the recommended empiric regimen for adults is ceftriaxone plus doxycycline to address both pathogens. If doxycycline cannot be used, azithromycin 1 g can substitute for the chlamydia component. Doxycycline or azithromycin alone would miss gonorrhea, and penicillin V alone is not reliable for gonorrhea due to resistance, so dual therapy is essential to prevent persistent infection and complications. Also, ensure partner notification and testing for other STIs.*

6. The material identifies HIV as:

- A. A retrovirus
- B. A bacterium
- C. A fungus
- D. A prion

HIV is a retrovirus because its replication hinges on reverse transcription of its RNA genome into DNA, followed by integration of that DNA into the host cell's genome. This RNA-to-DNA conversion and subsequent integration are defining features of retroviruses, and they drive how HIV persists and produces new virus particles. It isn't a bacterium, which would be a prokaryotic organism with a different cellular structure; it isn't a fungus, which is a eukaryotic organism with cellular machinery; and it isn't a prion, which is simply a misfolded protein with no genetic material. So the best label for HIV is a retrovirus.

7. Which antibiotic is most associated with increasing risk of *Clostridioides difficile* infection, and what stewardship practice helps reduce this risk?

- A. Clindamycin; stewardship to use narrow-spectrum agents and avoid unnecessary antibiotics**
- B. Fluoroquinolones; stewardship to de-escalate therapy promptly
- C. Amoxicillin; stewardship to limit duration
- D. Metronidazole; stewardship to avoid unnecessary combinations

Antibiotic exposure disrupts the normal gut microbiota, and when this balance is upset, Clostridioides difficile can overgrow and produce toxins that cause infection. Clindamycin is particularly associated with a high risk of C. difficile infection because it strongly disrupts anaerobic gut flora and can have a lasting impact on the microbial community. The stewardship practice that best reduces this risk is using narrow-spectrum antibiotics whenever possible and avoiding unnecessary antibiotic use. By targeting coverage to the specific pathogen and minimizing broad-spectrum exposure, you preserve protective gut bacteria and lessen the chance for C. difficile to take hold. De-escalation and limiting duration are helpful strategies too, but reducing overall unnecessary antibiotic exposure and choosing targeted therapy has the most direct impact on lowering C. difficile risk.

8. Which agents are first-line for treating *Chlamydia trachomatis* and *Mycoplasma genitalium* infections in adults?

- A. Ciprofloxacin or levofloxacin.
- B. Azithromycin or doxycycline.**
- C. Amoxicillin or cephalexin.
- D. Clindamycin or metronidazole.

Treating these intracellular genital pathogens requires drugs that penetrate host cells and act effectively inside them. Azithromycin and doxycycline both achieve strong intracellular concentrations and are proven to cure infections caused by Chlamydia trachomatis and Mycoplasma genitalium, making them the standard first-line choices for adults. For Chlamydia trachomatis, a one-time dose of azithromycin or a 7-day doxycycline course are conventional first-line regimens. For Mycoplasma genitalium, doxycycline is widely recommended as initial therapy because it offers reliable cure rates, while azithromycin can be used in settings with low macrolide resistance, though its effectiveness may be reduced by resistance. Other options—such as fluoroquinolones, or agents like amoxicillin, cephalexin, clindamycin, or metronidazole—do not reliably treat these intracellular organisms and are not considered first-line.

9. Azole antifungals carry a risk of hepatotoxicity; what monitoring is recommended?

- A. Nephrotoxicity; monitor creatinine.
- B. Ototoxicity; monitor hearing.
- C. Hepatotoxicity; monitor LFTs.**
- D. QT prolongation; monitor ECG.

Azole antifungals can cause liver injury, so monitoring focuses on hepatic safety. Obtain baseline liver function tests (AST/ALT, alkaline phosphatase, bilirubin) before starting therapy, then recheck within the first one to two weeks and periodically during treatment. Increase monitoring or adjust therapy if LFTs rise significantly or if symptoms such as jaundice, right upper-quadrant pain, or fatigue appear. Other potential toxicities like kidney injury, hearing loss, or QT changes are not the primary monitoring target for this class; the emphasis here is on detecting hepatotoxicity through LFTs.

10. Which organisms are commonly involved in opportunistic infections?

- A. Clostridium difficile, Candida albicans**
- B. Staphylococcus aureus, Streptococcus pneumoniae**
- C. Escherichia coli, Klebsiella pneumoniae**
- D. Pseudomonas aeruginosa, Mycobacterium tuberculosis**

Opportunistic infections occur when host defenses are compromised, allowing organisms that are normally either harmless or kept in check to cause disease. Clostridium difficile fits this pattern because it typically blooms after broad-spectrum antibiotics disrupt the gut flora, leading to antibiotic-associated colitis. Candida albicans is a common commensal fungus on skin and mucous membranes, but when immunity is reduced or flora is disturbed, it can overgrow and invade, causing oral, vaginal, or systemic infections. Together, they exemplify organisms that cause disease primarily in the context of impaired defenses, unlike many pathogens that commonly cause illness in healthy individuals. Other listed organisms can cause disease as well, but their typical role is not as classic for opportunistic infections as these two.

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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.

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

<https://antiinfectivemedics.examzify.com>

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

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