

OPHTHALMIC MEDICATIONS PRACTICE TEST (SAMPLE)

STUDY GUIDE



**SAMPLE STUDY GUIDE
WITH LIMITED QUESTIONS**

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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 topical antibiotic is commonly used for MRSA coverage in ophthalmology when needed?**
 - A. Moxifloxacin
 - B. Vancomycin
 - C. Ciprofloxacin
 - D. Tobramycin

- 2. Which drop is used for applanation tonometry and stains corneal or conjunctival defects?**
 - A. Benoxinate + Fluorescein
 - B. Proparacaine + Fluorescein
 - C. Tetracaine + Fluorescein
 - D. Lidocaine + Fluorescein

- 3. Which topical antiviral is associated with ocular surface toxicity with prolonged use?**
 - A. Acyclovir
 - B. Ganciclovir
 - C. Trifluridine
 - D. Idoxuridine

- 4. Which agent is an alpha agonist used to lower intraocular pressure?**
 - A. Brimonidine 0.1%, 0.15%, 0.2%
 - B. Timolol 0.5%
 - C. Dorzolamide
 - D. Latanoprost

- 5. Dorzolamide cautions include conjunctival hyperemia; which term describes this finding?**
 - A. Red eye
 - B. Blurry vision
 - C. Eye pain
 - D. Tearing

- 6. Which drug is described as the most common cause of contact dermatitis?**
- A. Acetazolamide
 - B. Dorzolamide
 - C. Timolol
 - D. Latanoprost
- 7. Which topical medication lowers aqueous humor production by inhibiting carbonic anhydrase?**
- A. Dorzolamide
 - B. Brinzolamide
 - C. Acetazolamide
 - D. Methazolamide
- 8. What is a typical first-line treatment for allergic conjunctivitis that also stabilizes mast cells?**
- A. Antihistamine-mast cell stabilizers such as olopatadine.
 - B. Corticosteroid drops.
 - C. Antibiotic drops.
 - D. Beta-blocker drops.
- 9. Which statement about prostaglandin analogs is true?**
- A. They are typically given twice daily
 - B. They frequently cause systemic hypotension
 - C. They are typically given once daily and have favorable systemic safety
 - D. They require refrigeration
- 10. Which agent should be used with caution in patients with narrow-angle glaucoma due to the risk of increasing intraocular pressure?**
- A. Timolol
 - B. Latanoprost
 - C. Phenylephrine
 - D. Acyclovir

Answers

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

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Explanations

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1. Which topical antibiotic is commonly used for MRSA coverage in ophthalmology when needed?

- A. Moxifloxacin
- B. Vancomycin**
- C. Ciprofloxacin
- D. Tobramycin

MRSA coverage requires an agent with reliable activity against methicillin-resistant *Staphylococcus aureus*. Vancomycin works by binding the D-Ala-D-Ala terminus of peptidoglycan precursors, blocking cell wall synthesis, and remains highly active against MRSA strains. In ophthalmology, topical vancomycin is the go-to option when MRSA coverage is needed because it consistently targets Gram-positive cocci including MRSA, whereas fluoroquinolones like moxifloxacin or ciprofloxacin have variable MRSA activity and resistance is common, and tobramycin mainly covers Gram-negative bacteria with limited MRSA activity. So vancomycin offers the most reliable MRSA coverage for topical ocular infections.

2. Which drop is used for applanation tonometry and stains corneal or conjunctival defects?

- A. Benoxinate + Fluorescein**
- B. Proparacaine + Fluorescein
- C. Tetracaine + Fluorescein
- D. Lidocaine + Fluorescein

The key idea is that applanation tonometry relies on a fluorescein-stained corneal surface to visualize the tear film and mires, while also minimizing patient discomfort so the eye stays steady. A single drop that provides both anesthesia and fluorescein staining fits this need perfectly, streamlining the procedure. Benoxinate is a short-acting corneal anesthetic, and when combined with fluorescein in a single drop (a formulary like Fluress), it both numbs the eye and stains the corneal/conjunctival surface. This makes it ideal for applanation tonometry because the clinician can quickly obtain clear mires under blue light and the patient experiences less distress. The other options pair anesthetics with fluorescein but are not standard single drops used specifically for tonometry and surface staining. They typically involve applying anesthetic and fluorescein separately or use anesthetics that are not as commonly preferred for this diagnostic step.

3. Which topical antiviral is associated with ocular surface toxicity with prolonged use?

- A. Acyclovir
- B. Ganciclovir
- C. Trifluridine**
- D. Idoxuridine

Prolonged exposure of the ocular surface to a topical antiviral can irritate and damage the corneal epithelium. Trifluridine is a thymidine analog used to treat herpes simplex virus infections on the cornea, but it has a narrow therapeutic window and notable toxicity with extended use. Its effect on rapidly dividing corneal epithelial cells leads to signs like conjunctival irritation, tearing, punctate keratitis, and epithelial defects. Because of this, clinicians aim to limit how long trifluridine is used and monitor the eye closely, often switching to a less toxic option for longer treatment. Acyclovir topical tends to be better tolerated on the ocular surface and is used for epithelial keratitis with fewer long-term toxicity concerns. Ganciclovir gel can cause some irritation but is generally well tolerated for longer courses. Idoxuridine is older and is known for substantial ocular surface toxicity and phototoxicity, so it's used much less today.

4. Which agent is an alpha agonist used to lower intraocular pressure?

A. Brimonidine 0.1%, 0.15%, 0.2%

B. Timolol 0.5%

C. Dorzolamide

D. Latanoprost

Brimonidine is an alpha-2 adrenergic agonist. It lowers intraocular pressure mainly by reducing the production of aqueous humor in the ciliary body, and it can also modestly increase outflow through the uveoscleral pathway. Among the options, it is the one that acts as an alpha agonist. Timolol is a beta-blocker that lowers IOP by decreasing aqueous production, dorzolamide is a carbonic anhydrase inhibitor that reduces production, and latanoprost is a prostaglandin analogue that increases outflow. So brimonidine is the alpha agonist used to lower IOP.

5. Dorzolamide cautions include conjunctival hyperemia; which term describes this finding?

A. Red eye

B. Blurry vision

C. Eye pain

D. Tearing

Conjunctival hyperemia means the conjunctival vessels are engorged, giving the eye a red, bloodshot appearance. The everyday way to describe this finding is simply "red eye." Dorzolamide eye drops commonly cause this mild, local side effect due to irritation and vascular dilation of the conjunctiva. It's not describing blurry vision, eye pain, or tearing, which point to other issues or symptoms.

6. Which drug is described as the most common cause of contact dermatitis?

A. Acetazolamide

B. Dorzolamide

C. Timolol

D. Latanoprost

Drug-induced contact dermatitis is a delayed hypersensitivity reaction to a medication, often linked to the presence of a sulfonamide group in the drug. Acetazolamide, a systemic sulfonamide carbonic anhydrase inhibitor, is a classic sensitizer; its sulfonamide structure makes it more likely to trigger a true allergic contact dermatitis compared with the other options. While dorzolamide is also a sulfonamide and can cause local irritation, the systemic exposure and sensitization associated with acetazolamide make it the more common culprit in this context. Timolol and latanoprost are less typically associated with true contact dermatitis and more with other local or systemic effects.

7. Which topical medication lowers aqueous humor production by inhibiting carbonic anhydrase?

- A. Dorzolamide**
- B. Brinzolamide
- C. Acetazolamide
- D. Methazolamide

Topical carbonic anhydrase inhibitors reduce aqueous humor production by blocking the enzyme carbonic anhydrase in the ciliary body. This decreases formation of bicarbonate and the associated ion and water transport into the eye, leading to less aqueous humor being produced and lower intraocular pressure. Dorzolamide is a topical CA inhibitor given as eye drops, directly targeting the site of production to achieve this effect. (Note: other topical options exist, like brinzolamide, which work by the same mechanism, while acetazolamide and methazolamide are systemic CA inhibitors used orally.) Therefore, dorzolamide is the topical agent that lowers aqueous humor production by inhibiting carbonic anhydrase.

8. What is a typical first-line treatment for allergic conjunctivitis that also stabilizes mast cells?

- A. Antihistamine-mast cell stabilizers such as olopatadine.**
- B. Corticosteroid drops.
- C. Antibiotic drops.
- D. Beta-blocker drops.

In allergic conjunctivitis the goal is to both block the effect of histamine and prevent mast cell degranulation, reducing itching, redness, and tearing. A dual-action topical agent that does this—antihistamine plus mast cell stabilization—is a natural first-line choice. Olopatadine fits this perfectly: it blocks histamine H1 receptors to diminish itching and ocular symptoms, and it stabilizes mast cell membranes to prevent release of histamine and other mediators on allergen exposure. This combination provides rapid relief and ongoing control with a convenient dosing pattern, and it generally has a favorable safety profile compared with steroids. Antibiotic drops aren't indicated unless there's a bacterial infection, and beta-blocker drops aren't used for allergy.

9. Which statement about prostaglandin analogs is true?

- A. They are typically given twice daily
- B. They frequently cause systemic hypotension
- C. They are typically given once daily and have favorable systemic safety**
- D. They require refrigeration

Prostaglandin analogs lower intraocular pressure primarily by increasing outflow of aqueous humor through the uveoscleral pathway via FP receptor activation, which allows a potent effect with once-daily dosing. They're given once daily because their effect lasts about 24 hours, making the evening dose convenient and effective for sustained IOP reduction. Their systemic safety is favorable because only a small amount enters the systemic circulation, so systemic hypotension and other systemic adverse effects are uncommon. The main downsides are local ocular effects such as conjunctival redness, eyelash growth, and periocular pigmentation, not systemic issues. Dosing them twice daily isn't needed for efficacy, and while refrigeration practices vary by product, they are not a defining feature of typical use.

10. Which agent should be used with caution in patients with narrow-angle glaucoma due to the risk of increasing intraocular pressure?

- A. Timolol
- B. Latanoprost
- C. Phenylephrine**
- D. Acyclovir

Dilation of the pupil can worsen narrow-angle glaucoma because it narrows the angle where fluid drains from the eye, raising the pressure. Phenylephrine is a potent alpha-1 agonist that causes significant pupil dilation (mydriasis). In eyes with narrow angles, this dilation can push the iris forward and narrow or close the drainage angle, leading to a rise in intraocular pressure and potentially triggering an acute angle-closure attack. The other options don't have this effect. Timolol reduces aqueous humor production, helping lower intraocular pressure. Latanoprost increases outflow of aqueous humor, also lowering pressure. Acyclovir is an antiviral with no direct impact on intraocular pressure. If dilation is needed in someone with narrow angles, it should be used with caution and under close monitoring, or alternatives should be considered.

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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://ophthalmicmeds.examzify.com>

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

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