

MANOR PREBOARDS MODULE 5 PRACTICE TEST (SAMPLE)

STUDY GUIDE



SAMPLE STUDY GUIDE WITH LIMITED QUESTIONS

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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. FD&C Red 40 colorant is which option in the following list?**
 - A. Allura Red
 - B. Sunset Yellow
 - C. Erythrosine
 - D. Phloxine B

- 2. What is the mechanism of action of vancomycin and a major toxicity concern?**
 - A. Inhibits cell wall synthesis by binding D-Ala-D-Ala; nephrotoxicity and ototoxicity; red man syndrome can occur with rapid infusion.
 - B. Inhibits bacterial DNA gyrase; photosensitivity.
 - C. Inhibits protein synthesis at 50S; causes rash.
 - D. Disrupts cell membrane proton motive force; tinnitus.

- 3. Which coating provides delayed release by resisting gastric fluid and dissolving in the intestine?**
 - A. Gelatin Coated Tablets
 - B. Sugar Coated Tablets
 - C. Enteric Coated Tablets
 - D. Compression Coated Tablets

- 4. Regarding Transdermal Delivery Systems, how many of the following statements are correct?**
 - A. ALL statements are correct
 - B. ONLY ONE statement is correct
 - C. TWO statements are correct
 - D. THREE statements are correct

- 5. Catapres® patch is an example of which transdermal patch type?**
 - A. Reservoir-type
 - B. Matrix-type
 - C. Adhesive-type
 - D. None

6. Nicotine (Nicoderm) transdermal drug delivery system can be applied to the following skin site:
- A. Arm
 - B. Upper chest
 - C. Behind ear
 - D. Back
7. Metformin, when used as monotherapy in type 2 diabetes, is unlikely to cause hypoglycemia.
- A. True; it does not cause hypoglycemia when used alone.
 - B. True; it causes hypoglycemia in most patients.
 - C. False; it increases hepatic glucose production.
 - D. False; it directly increases insulin secretion.
8. Which granulation process involves the formation of spherical particles from wet granulation?
- A. Spray Drying
 - B. Spray Congealing
 - C. Spray Chilling
 - D. Spheronization
9. What is pharmacovigilance and why is it important?
- A. The process of marketing drugs.
 - B. The science of detecting, assessing, understanding, and preventing adverse drug effects; essential for patient safety and drug regulation.
 - C. A system for packaging drugs.
 - D. A study comparing drugs.
10. D&C Yellow 10 is a color additive that corresponds to which color?
- A. Allura Red
 - B. Phloxine B
 - C. Quinoline Yellow
 - D. Sunset Yellow

Answers

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

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Explanations

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1. FD&C Red 40 colorant is which option in the following list?

- A. Allura Red**
- B. Sunset Yellow
- C. Erythrosine
- D. Phloxine B

FD&C Red 40 is Allura Red. This synthetic red colorant is widely used in foods and beverages to give a bright red hue, and its FDA-approved name is Allura Red (often listed as Allura Red AC). The other items are different color additives: Sunset Yellow is a yellow dye, Erythrosine is a red dye used for other applications, and Phloxine B is another red dye not designated as Red 40.

2. What is the mechanism of action of vancomycin and a major toxicity concern?

- A. Inhibits cell wall synthesis by binding D-Ala-D-Ala; nephrotoxicity and ototoxicity; red man syndrome can occur with rapid infusion.**
- B. Inhibits bacterial DNA gyrase; photosensitivity.
- C. Inhibits protein synthesis at 50S; causes rash.
- D. Disrupts cell membrane proton motive force; tinnitus.

Vancomycin works by directly blocking the construction of the bacterial cell wall. It binds to the terminal D-Ala-D-Ala sequence of peptidoglycan precursors, preventing the enzymes that cross-link the wall from functioning. Without a proper, cross-linked cell wall, Gram-positive bacteria cannot withstand osmotic pressure and are effectively killed. A major toxicity concern is damage to the kidneys and ears, so nephrotoxicity and ototoxicity are important monitoring considerations. Additionally, rapid IV administration can trigger red man syndrome, a histamine-mediated infusion reaction rather than a true allergy. Vancomycin is mainly active against Gram-positive organisms, which is why it's used for MRSA and certain severe Clostridioides difficile infections (the latter typically treated orally for intestinal infection).

3. Which coating provides delayed release by resisting gastric fluid and dissolving in the intestine?

- A. Gelatin Coated Tablets
- B. Sugar Coated Tablets
- C. Enteric Coated Tablets**
- D. Compression Coated Tablets

Delaying release by resisting gastric fluid and dissolving in the intestine is achieved with enteric coating. This coating uses acid-resistant, pH-sensitive polymers that stay intact in the stomach's acidic environment, so the drug isn't released there. Once the tablet reaches the small intestine, where the fluid is less acidic, the coating dissolves and the drug is released. This protects acid-labile drugs and can reduce gastric irritation. Coatings like gelatin or sugar are designed to dissolve in gastric fluid, so they don't provide this kind of delayed release. Compression-coated tablets can delay release by adding a outer layer, but they aren't inherently resistant to stomach acid unless specifically formulated with an enteric polymer.

4. Regarding Transdermal Delivery Systems, how many of the following statements are correct?

- A. ALL statements are correct
- B. ONLY ONE statement is correct
- C. TWO statements are correct
- D. THREE statements are correct**

Transdermal delivery systems are designed to move a drug through the skin into systemic circulation, with controlled release and without going through the liver's first-pass metabolism. The statements in such a question are usually about what makes a drug suitable for transdermal delivery, how patches are built, and what effects or limitations they have. If three of the statements are true, while one is false, the correct choice is the one that indicates three statements are correct. In practice, you'd expect true points to include that patches deliver systemically, bypass first-pass metabolism, require drugs with suitable properties (roughly small to moderate molecular weight and appropriate lipophilicity for skin permeation), and have a defined patch structure (backing, drug-containing layer, and adhesive) with a specified wear time. Be mindful that skin irritation and absorption variability can be downsides. Without the exact statements, you can't identify which one is false, but recognizing the common truths about patch design and function helps you confirm why three statements being correct is the right overall conclusion.

5. Catapres® patch is an example of which transdermal patch type?

- A. Reservoir-type
- B. Matrix-type**
- C. Adhesive-type
- D. None

The question is about how transdermal patches control drug release. Catapres delivers clonidine through a matrix-type system, where the drug is dispersed throughout a polymer matrix that also acts as the adhesive to the skin. The release of clonidine is driven by diffusion out of this matrix, providing a steady, controlled flow to the skin. This differs from a reservoir-type patch, which would keep the drug in a separate reservoir separated from the skin by a rate-controlling membrane, and from a purely adhesive-type patch, where the drug is in the adhesive layer itself without a distinct matrix controlling release. The Catapres patch fits the matrix-type design because the active drug is embedded in the matrix that governs how it diffuses to the skin.

6. Nicotine (Nicoderm) transdermal drug delivery system can be applied to the following skin site:

- A. Arm
- B. Upper chest
- C. Behind ear**
- D. Back

Transdermal patches rely on clean, intact skin that allows steady drug absorption over time. The area behind the ear provides relatively thin, smooth, and hairless skin with good blood flow, so the nicotine can diffuse consistently and the patch adheres well. It's also discreet and less likely to be rubbed off by clothing or affected by arm movement, which helps maintain a steady delivery over the 24-hour wear period. While other sites like the arm, upper chest, or back can be used, behind the ear is particularly practical for keeping the patch in place and ensuring reliable absorption. Always apply to clean, dry skin and rotate sites to reduce irritation.

7. Metformin, when used as monotherapy in type 2 diabetes, is unlikely to cause hypoglycemia.

A. True; it does not cause hypoglycemia when used alone.

B. True; it causes hypoglycemia in most patients.

C. False; it increases hepatic glucose production.

D. False; it directly increases insulin secretion.

The key idea is that metformin lowers blood glucose without increasing insulin secretion, so as a single therapy it is unlikely to cause hypoglycemia. Metformin acts mainly by reducing hepatic gluconeogenesis and by improving insulin sensitivity in muscle, with a small effect on intestinal glucose absorption. Because it doesn't raise insulin levels or enhance insulin action beyond what's needed, blood glucose stays balanced and hypoglycemia is uncommon when used alone. The other statements conflict with how metformin works: it does not increase hepatic glucose production, and it does not directly boost insulin secretion. Hypoglycemia can occur if metformin is combined with other glucose-lowering drugs (like sulfonylureas or insulin) or in certain situations such as severe renal impairment, but on its own it's unlikely to cause hypoglycemia.

8. Which granulation process involves the formation of spherical particles from wet granulation?

A. Spray Drying

B. Spray Congealing

C. Spray Chilling

D. Spheronization

When a granulate is made wet in molding and binding steps, turning that wet mass into uniform spherical particles is achieved through spheronization. In this process, the wet extrudate mass is formed into rods or strands and placed in a spheronizer, where high shear and tumbling act on the moisture and surface tension to round the extrudates into spheres. The result is consistent, spherical beads ideal for multiparticulate dosage forms, with good flow and uniformity. Other methods listed work differently. Spray drying forms spheres by drying droplets quickly, not by shaping a previously wet granulate. Spray congealing and spray chilling involve forming spheres from molten or semi-solid droplets by cooling or solidifying, which isn't the same as transforming a wet granulate into spheres.

9. What is pharmacovigilance and why is it important?

A. The process of marketing drugs.

B. The science of detecting, assessing, understanding, and preventing adverse drug effects; essential for patient safety and drug regulation.

C. A system for packaging drugs.

D. A study comparing drugs.

Pharmacovigilance is the ongoing process of monitoring medicines to identify, evaluate, understand, and prevent adverse drug effects. It matters because it protects patients by detecting safety signals after a drug is on the market and guiding regulators on labeling, usage recommendations, and sometimes withdrawal if risks outweigh benefits. This work includes collecting reports of side effects, analyzing data to assess risk, and taking action to minimize harm. The other descriptions don't fit: marketing drugs is about promotion, not safety monitoring; packaging systems deal with delivering the drug rather than monitoring its safety; and a study comparing drugs is research design, not the continuous safety surveillance done in pharmacovigilance.

10. D&C Yellow 10 is a color additive that corresponds to which color?

- A. Allura Red
- B. Phloxine B
- C. Quinoline Yellow
- D. Sunset Yellow

D&C Yellow 10 maps to Quinoline Yellow. The D&C Yellow numbers identify a specific dye, and the tenth entry in that system is Quinoline Yellow, the yellow color used in some drugs and cosmetics. The other names listed correspond to different color additives (for example, Allura Red is a red dye and Sunset Yellow is a separate yellow dye), so they don't match D&C Yellow 10.

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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://manorpreboardsmod5.examzify.com>

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

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