# PHARMACEUTICS II EXAM 2 CONCEPTS PRACTICE TEST (SAMPLE)

## STUDY GUIDE



## SAMPLE STUDY GUIDE WITH LIMITED QUESTIONS

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# Table of Contents


Copyright ..... 1

Table of Contents ..... 2

Introduction ..... 3

How to Use This Guide ..... 4

Questions ..... 5

Answers ..... 8

Explanations ..... 10

Next Steps ..... 15


SAMPLE

# 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.

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# 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!

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# Questions

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**1. Which of the following is NOT an example of a wetting agent?**

A. Flavorings

B. Alcohol

C. Glycerin

D. Surfactants

**2. In a suspension, how are the solid particles described after preparation?**

A. The solid particles are dissolved

B. The solid particles are dispersed but not dissolved

C. The solid particles are vaporized

D. The solid particles are reacted

**3. Which mortar is commonly used for compounding preparations?**

A. Wedgwood

B. Porcelain

C. Glass

D. Marble

**4. Which of the following is an explicit example of a wetting agent listed in the materials?**

A. Flavorings

B. Glycerin

C. Distilled water

D. Colorants

**5. Which statement correctly lists the general requirements for injections?**

A. Sterile, pyrogen-free, particle-free if solution, pH of blood, and isotonic if possible

B. Non-sterile injections are acceptable

C. Non-pyrogen-free injections are acceptable

D. Colorless and odorless injections

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**6. Which term describes the phase that contains the dispersed particles in a dispersed system?**

A. dispersed phase

B. vehicle

C. dispersion medium

D. coarse phase

**7. What role does bentonite play in suspension prescriptions?**

A. Stabilizer and thickening agent

B. Flavoring agent

C. Preservative

D. Wetting agent

**8. Which statement best describes syrup preparation by agitation?**

A. Sucrose is added to water and the mixture is heated without agitation.

B. Sucrose is added to purified water and agitated; other solid ingredients are added to the syrup and agitated (slow process).

C. Syrups are formed by adding all ingredients at once and rapidly mixing.

D. Temperature is the only factor; agitation is unnecessary.

**9. Plastic drops recommended for children due to safety concerns.**

A. Not applicable

B. True

C. Sometimes

D. False

**10. ___ dispersions contain large particles (10-50 µm)**

A. coarse

B. fine

C. colloidal

D. very fine

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# Answers

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

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# Explanations

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## 1. Which of the following is NOT an example of a wetting agent?

A. Flavorings

B. Alcohol

C. Glycerin

D. Surfactants

*Wetting agents reduce surface tension so a liquid can spread over a solid surface, improving wetting and dissolution. Surfactants are the classic example of wetting agents. Glycerin and alcohol can also enhance wetting in formulations by acting as co-solvents and lowering interfacial tension. Flavorings, however, are added for taste or aroma and do not function to modify wetting properties in a reliable way, so they are not considered wetting agents.*

## 2. In a suspension, how are the solid particles described after preparation?

A. The solid particles are dissolved

B. The solid particles are dispersed but not dissolved

C. The solid particles are vaporized

D. The solid particles are reacted

*Solid particles in a suspension are dispersed in the liquid but not dissolved. In a suspension, the solid remains as discrete particles that are physically carried by the liquid, forming a heterogeneous mixture. Because the particles are not dissolved, they can be visible and may settle out over time unless the suspension is stirred or stabilized. This is different from a solution, where the solute is dissolved at the molecular level. The other options imply phase changes or chemical transformation (vaporization, reaction) or complete dissolution, which do not describe a suspension.*

## 3. Which mortar is commonly used for compounding preparations?

A. Wedgwood

B. Porcelain

C. Glass

D. Marble

*The material of the mortar-pestle matters because you want a surface that is non-porous, inert, and easy to clean so drugs aren't absorbed, contaminated, or altered during grinding. Glass mortar fits best for routine compounding because its smooth, non-porous surface doesn't absorb drugs or solvents and is easy to sterilize and clean, making it versatile for both dry powders and liquids that need to be made into pastes or suspensions. Other types have drawbacks: rougher surfaces like Wedgwood mortars can grind tough materials but may trap residues and are harder to clean, risking cross-contamination. Porcelain mortars are smoother but can stain or interact with certain substances, and marble is porous, which can absorb liquids or oils and harbor contaminants. So glass provides the most reliable, broadly compatible option for daily compounding.*

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## 4. Which of the following is an explicit example of a wetting agent listed in the materials?

A. Flavorings

B. Glycerin

C. Distilled water

D. Colorants

*Wetting agents lower the interfacial tension between a liquid and a solid, helping the liquid spread and wet surfaces more effectively. Glycerin fits this role well because it's a viscous, hygroscopic liquid that acts as a humectant and wetting agent in many pharmaceutical formulations, improving how liquids wet powders and other solids and aiding uniform dispersion. Flavorings and colorants are additives for taste and appearance, not for altering surface tension, and distilled water is simply the solvent or vehicle, not a dedicated wetting agent. So glycerin is the explicit wetting agent listed.*

## 5. Which statement correctly lists the general requirements for injections?

A. Sterile, pyrogen-free, particle-free if solution, pH of blood, and isotonic if possible

B. Non-sterile injections are acceptable

C. Non-pyrogen-free injections are acceptable

D. Colorless and odorless injections

*Injections must meet safety standards that protect the patient because parenteral administration bypasses natural barriers. They need to be sterile to prevent infection, pyrogen-free to avoid fever, and free of particulates to prevent embolic or tissue irritation. The solution should be close to the body's own fluids in osmolarity and pH, meaning it is isotonic with blood and has a physiologic pH to minimize damage to cells and tissues. The statement that includes sterile, pyrogen-free, particulate-free (if it's a solution), pH compatible with blood, and isotonic if possible covers these critical requirements. Non-sterile or non-pyrogen-free injections are unsafe because they can cause infection or fever. Color, odor, or other appearance traits are not determining safety for injections, since many legitimate preparations may vary in color or scent and still be safe or unsafe; the key factors are sterility, pyrogen control, particulates, and physiologic compatibility.*

## 6. Which term describes the phase that contains the dispersed particles in a dispersed system?

A. dispersed phase

B. vehicle

C. dispersion medium

D. coarse phase

*In a dispersed system, there are two distinct parts: the phase that contains the particles being dispersed, and the surrounding fluid that carries them. The phase with the particles is called the dispersed phase. The surrounding fluid—often called the vehicle or dispersion medium—acts as the continuous phase in which those particles are distributed. For example, in an oil-in-water emulsion, the oil droplets are the dispersed phase while water is the dispersion medium. The term coarse phase isn't a standard descriptor for the phase containing the particles. So, the term that describes the phase with the dispersed particles is the dispersed phase.*

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## 7. What role does bentonite play in suspension prescriptions?

A. Stabilizer and thickening agent

B. Flavoring agent

C. Preservative

D. Wetting agent

*In suspension prescriptions, keeping solid particles evenly dispersed over time is the goal, and a key way to achieve that is by increasing the viscosity and building a network that stabilizes the dispersed phase. Bentonite hydrates in water to form a viscous, gel-like dispersion. The swollen clay particles create a three-dimensional network that traps and suspends the solids, slowing their settling according to how viscosity and the gel structure hinder movement. This dual action—raising viscosity to slow sedimentation and providing a stabilizing matrix around particles—makes bentonite an effective stabilizer and thickening agent for suspensions. Flavoring agents, preservatives, and wetting agents serve other roles—taste enhancement, microbial protection, and improved wetting or dispersion, respectively. Bentonite's primary contribution in this context is the combination of stabilization and thickening, not flavor, preservation, or surface-tension modification.*

## 8. Which statement best describes syrup preparation by agitation?

A. Sucrose is added to water and the mixture is heated without agitation.

B. Sucrose is added to purified water and agitated; other solid ingredients are added to the syrup and agitated (slow process).

C. Syrups are formed by adding all ingredients at once and rapidly mixing.

D. Temperature is the only factor; agitation is unnecessary.

*The main idea is that agitation speeds up dissolution and keeps all components evenly distributed in the syrup. Stirring increases mass transfer, breaking the boundary layer around dissolving sugar crystals, and helps keep solid ingredients from settling or clumping. The best statement reflects dissolving sucrose in purified water with continued stirring, then adding the other solid ingredients to the syrup gradually while maintaining agitation. This slow, continuous mixing prevents localized supersaturation, reduces the chance of crystallization, and yields a homogeneous syrup where all components are evenly incorporated. Why the other approaches fit less well: heating without agitation can slow dissolution and allow crystals to reform on container surfaces, leading to incomplete dissolution. Adding all ingredients at once and mixing rapidly can cause clumping or uneven distribution, resulting in an inhomogeneous syrup. Temperature matters, but without agitation, even at the right temperature, dissolution and uniform mixing are not reliably achieved.*

## 9. Plastic drops recommended for children due to safety concerns.

A. Not applicable

B. True

C. Sometimes

D. False

*In pediatric packaging, safety-driven choices favor plastic drops because they are shatterproof, lighter, and easier to handle, which reduces the risk of injury from broken glass and makes dosing easier for caregivers. The dropper design also helps with controlled, consistent dosing and minimizes spills, both important for young patients. Therefore, the statement is true. The other options don't fit the general safety practice: while there may be rare exceptions, the usual approach prioritizes plastic for pediatric safety, so "Sometimes" or "False" aren't accurate reflections of standard use.*

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## 10. ____ dispersions contain large particles (10-50 µm)

A. coarse

B. fine

C. colloidal

D. very fine

*Particle size determines how a dispersion is classified. Coarse dispersions have relatively large particles, typically greater than 1 µm and often in the tens of micrometers. A range of 10–50 µm fits this category, so the system behaves like a suspension or emulsion with visibly large particles that tend to settle and require stirring to stay uniform. Smaller ranges correspond to finer dispersions or colloidal systems, where particles are in the submicron or nanometer scale and remain dispersed more easily due to Brownian motion. Thus, 10–50 µm is characteristic of coarse dispersions.*

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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://pharmaceutics2exam2concepts.examzify.com

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

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