PHARMACEUTICS II EXAM 2 CONCEPTS 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

1. ____ is a type of liquid preparation containing undissolved or immiscible drug distributed throughout a vehicle.

A. Emulsion

B. Dispersed system

C. Suspension

D. Solution

2. What are the four ways the internal phase of emulsions can form aggregates?

A. creaming, aggregation, coalescence, and breaking

B. creaming, flocculation, coagulation, and breaking

C. creaming, flocculation, coalescence, and sedimentation

D. creaming, flocculation, coalescence, and breaking

3. Compared to elixirs, syrups have a higher proportion of alcohol.

A. True

B. False

C. Not necessarily

D. Sometimes

4. ____ are clear, sweetened, flavored hydroalcoholic solutions intended for oral use.

A. Suspensions

B. Tinctures

C. Emulsions

D. Elixirs

5. Heat-labile components should be added last when using the fusion method.

A. True

B. False

C. Not applicable

D. Sometimes

6. Benzoin and iodine are examples of what types of tinctures?

A. Oral

B. Topical

C. Inhalation

D. Digestive

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

A. Flavorings

B. Alcohol

C. Glycerin

D. Surfactants

8. Which of the following is an example of a dispersed system?

A. An emulsion

B. A true solution

C. A gas

D. A homogeneous mixture

9. According to the USP, zinc oxide ointment should contain not less than and not more than zinc oxide.

A. 18.5%, 21.5%

B. 18%, 22%

C. 20%, 25%

D. 15%, 25%

10. In a common steam sterilization cycle, what is the typical pressure used (in psi)?

A. 5 psi

B. 10 psi

C. 15 psi

D. 20 psi

Answers

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

Explanations

1. ____ is a type of liquid preparation containing undissolved or immiscible drug distributed throughout a vehicle.

A. Emulsion

B. Dispersed system

C. Suspension

D. Solution

Dispersed systems refer to liquid preparations in which the drug exists as undissolved particles or droplets distributed throughout a continuous liquid phase. This means the drug is not dissolved but is dispersed within the vehicle, matching the description of an undissolved or immiscible substance spread throughout the liquid. This category encompasses suspensions (solid particles in liquid) and emulsions (immiscible liquids as droplets in another liquid). A solution, by contrast, has the drug fully dissolved with no undissolved material.

2. What are the four ways the internal phase of emulsions can form aggregates?

A. creaming, aggregation, coalescence, and breaking

B. creaming, flocculation, coagulation, and breaking

C. creaming, flocculation, coalescence, and sedimentation

D. creaming, flocculation, coalescence, and breaking

Emulsions can form aggregates of the dispersed droplets through both gravitational separation and inter-droplet interactions. If the dispersed phase is less dense than the continuous phase, droplets drift upward and collect at the top—creaming. If it is more dense, they drift downward to the bottom—sedimentation. Droplets can also cluster together without merging, a process called flocculation, where they stay as individual droplets but move together as a loose aggregate. Finally, droplets can merge to form larger droplets, known as coalescence, which directly changes the size distribution and accelerates separation. These four modes—creaming, sedimentation, flocculation, and coalescence—describe how the internal phase can form aggregates in an emulsion.

3. Compared to elixirs, syrups have a higher proportion of alcohol.

A. True

B. False

C. Not necessarily

D. Sometimes

In pharmaceutical liquids, syrups are concentrated aqueous sugar solutions, while elixirs are hydro-alcoholic solutions where alcohol serves as part of the solvent. Because alcohol is a defining component of elixirs, they contain a noticeable amount of ethanol, whereas syrups contain little to no alcohol beyond trace amounts from flavorings or preservatives. Thus, elixirs have a higher proportion of alcohol than syrups, making the statement false. Some syrups may include small amounts of alcohol, but the overall alcohol content is still much higher in elixirs.

4. ____ are clear, sweetened, flavored hydroalcoholic solutions intended for oral use.

A. Suspensions

B. Tinctures

C. Emulsions

D. Elixirs

Elixirs are clear, sweetened, flavored hydroalcoholic solutions intended for oral use. This form dissolves drugs in a hydroalcoholic solvent and includes sugar and flavoring to make the medicine pleasant to take, which is why it's described exactly this way. The other forms don't fit because tinctures are alcoholic extracts that are typically bitter and not prepared to be palatable; suspensions are liquids with dispersed solid particles and may be opaque or require shaking; emulsions are mixtures of immiscible liquids that are not single-phase solutions. Syrups are aqueous sugar solutions with no alcohol, so they aren't hydroalcoholic.

5. Heat-labile components should be added last when using the fusion method.

A. True

B. False

C. Not applicable

D. Sometimes

When using the fusion method, you melt the base to create a uniform liquid so all ingredients can mix evenly. Heat-labile components are sensitive to high temperatures, so they should not be exposed to the molten mixture for long. Adding them after you remove the heat (or after the base has cooled to a safe temperature) protects them from degradation, volatilization, or loss of potency and helps ensure they're distributed properly in the final product. If they were added while the base was still molten, their stability could be compromised and the final formulation might have clumping or uneven dosing. So the statement is true: heat-labile components should be added last when using the fusion method.

6. Benzoin and iodine are examples of what types of tinctures?

A. Oral

B. Topical

C. Inhalation

D. Digestive

The question tests the route of use for tinctures. Benzoin tincture and iodine tincture are alcohol-based solutions prepared for external application on the skin, not for ingestion or inhalation. Iodine tincture is a classic topical antiseptic applied to skin to disinfect before procedures, while benzoin tincture provides a protective, sticky film on the skin and can be used to facilitate wound dressing. Because their purpose is external skin use, they are categorized as topical tinctures rather than oral, inhalation, or digestive forms.

7. 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.

8. Which of the following is an example of a dispersed system?

A. An emulsion

B. A true solution

C. A gas

D. A homogeneous mixture

Dispersed systems are two-phase, where small droplets or particles of one phase are distributed within a continuous other phase. An emulsion is exactly that: tiny droplets of one liquid dispersed in another immiscible liquid (for example, oil droplets in water), creating a heterogeneous system with a distinct dispersed phase. A true solution is uniform at the molecular level, so there's no separate dispersed phase—it's a single-phase mixture. A gas is also a single phase in this context, unless it's formed into an aerosol, which isn't the case here. A homogeneous mixture is uniform throughout and lacks dispersed droplets or particles. Thus, an emulsion best fits the idea of a dispersed system.

9. According to the USP, zinc oxide ointment should contain not less than and not more than zinc oxide.

A. 18.5%, 21.5%

B. 18%, 22%

C. 20%, 25%

D. 15%, 25%

The principle being tested is how USP sets a potency specification for a medicated ointment. For zinc oxide ointment, the active ingredient must be present in a narrow, defined range by weight to guarantee consistent therapeutic effect and product quality. The USP monograph specifies not less than 18.5% and not more than 21.5% zinc oxide. This keeps the product near the common labeling strength (around 20%) while allowing for analytical and manufacturing variation. If the content were below the lower limit, the ointment could be under-potent and less effective; if above the upper limit, it could alter physical properties like texture and stability and potentially affect safety. So the 18.5–21.5% range is the specification that aligns with the USP standard for zinc oxide ointment.

10. In a common steam sterilization cycle, what is the typical pressure used (in psi)?

A. 5 psi

B. 10 psi

C. 15 psi

D. 20 psi

Steam sterilization relies on moist heat to destroy microorganisms. The temperature of saturated steam is determined by its pressure: higher pressure means higher temperature. In common autoclave practice, the standard target is 121°C, which is achieved with about 15 psi of gauge pressure. This combination—121°C for a defined exposure time—provides reliable sterilization for a wide range of materials. Lower pressures (like 5 or 10 psi) would yield lower temperatures and may not inactivate all spores promptly, while higher pressures (around 20 psi) raise the temperature further but aren't the typical default cycle and can risk damage to sensitive items. So the typical pressure used is 15 psi.

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!