

### Practice MCQ For Government Pharmacist Exams

### **Pharmaceutics I Unit III**

**Monophasic liquids:** Definitions and preparations of Gargles, Mouthwashes, Throat Paint, Eardrops, Nasal drops, Enemas, Syrups, Elixirs, Liniments and Lotions.

**Suspensions:** Definition, advantages and disadvantages, classifications, Preparation of suspensions; Flocculated and Deflocculated suspension & stability problems and methods to overcome.

**Emulsions:** Definition, classification, emulsifying agent, test for the identification of type of Emulsion, Methods of preparation & stability problems and methods to overcome.

### **1. Monophasic liquids refer to:**

- a) Suspensions with multiple phases
- b) True solutions with a single, uniform phase
- c) Liquids containing only water
- d) Ointments and creams

#### 2. Gargles are:

- a) Intended for swallowing
- b) Used to cleanse and soothe the throat
- c) Applied directly to a wound
- d) Instilled into the ear canal

#### 3. Common ingredients in gargles may include:

- a) Antibiotics only
- b) Antiseptics, analgesics, or flavorings
- c) Corticosteroids



d) Antidepressants

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#### 4. Mouthwashes are used for:

- a) Treating serious infections in the mouth
- b) Freshening breath, reducing plaque, and promoting oral hygiene
- c) Relieving pain in the throat
- d) Instilling into the eyes

#### 5. Mouthwashes may contain ingredients like:

- a) Antihistamines
- b) Fluoride for strengthening teeth
- c) Muscle relaxants
- d) Sleeping aids

#### 6. Throat paints are:

- a) Administered orally
- b) Viscous liquids applied directly to a sore throat for localized relief
- c) Injected into a muscle
- d) Absorbed through the skin

#### 7. Throat paints may contain:

- a) Laxatives
- b) Local anesthetics for pain relief
- c) Anti-diarrheal medications
- d) Anticonvulsants



#### 8. Eardrops are used to:

- a) Treat eye infections
- b) Treat infections or soften earwax in the ear canal
- c) Cleanse and soothe the nasal passages
- d) Deliver medication systemically through the skin

#### 9. Eardrops may contain:

- a) Diuretics
- b) Antibiotics or corticosteroids for ear infections
- c) Anti-nausea medications
- d) Medications for high blood pressure

#### 10. Monophasic liquids offer advantages like:

- a) Difficulty in measuring accurate doses
- b) Ease of use, rapid onset of action, and good bioavailability
- c) Requirement for refrigeration
- d) Increased risk of allergic reactions

#### 11. When preparing monophasic liquids, pharmacists should ensure:

- a) The chosen container is attractive for marketing purposes
- b) The ingredients are compatible and form a stable solution
- c) The solution has a strong flavor to mask the taste of medication
- d) The solution is priced higher than other dosage forms



#### 12. Monophasic liquids may require the use of:

- a) Sleeping pills to help patients fall asleep after use
- b) Preservatives to prevent microbial growth, especially for multi-use solutions
- c) Antidepressants to improve patient mood
- d) Laxatives to help patients eliminate the medication from their body

# **13.** Pharmacists should counsel patients on the proper use of monophasic liquids, including:

- a) Swallowing the entire amount of a gargle
- b) Following specific instructions for gargling, swishing, or instillation
- c) Applying throat paint directly to the tongue
- d) Sharing leftover ear drops with others

#### 14. It is important to advise patients to:

- a) Use expired monophasic liquids to save money
- b) Discontinue use if they experience any side effects and consult a healthcare professional
- c) Not to worry about proper storage conditions
- d) Use any remaining solution for a different condition

#### 15. Monophasic liquids can be a valuable option for patients who have difficulty with:

- a) Reading medication labels
- b) Swallowing solid dosage forms
- c) Applying topical creams
- d) Remembering to take medication at specific times



# 16. Pharmacists play a crucial role in ensuring the safe and effective use of monophasic liquids by:

- a) Focusing on brand promotion
- b) Providing accurate information and counseling to patients
- c) Delegating all dispensing tasks to pharmacy technicians
- d) Rushing patients through the dispensing process

#### 17. When dispensing monophasic liquids, pharmacists should consider the:

- a) Patient's age and preferences only
- b) Patient's age, medical condition, and potential drug interactions
- c) Expiry date of the medication only

#### 18. Monophasic liquids may have potential risks, such as:

- a) Increased effectiveness compared to other dosage forms
- b) Accidental ingestion, especially for solutions intended for topical use
- c) Reduced absorption by the body
- d) Offering no benefit over placebo

#### **19.** Pharmacists can help mitigate risks by:

- a) Using colorful labels to attract attention
- b) Providing clear instructions and warnings on the medication label
- c) Offering a discount on refills
- d) Recommending alternative medications without considering the patient's needs

#### 20. Suspensions are heterogeneous mixtures containing:

a) Two gas phases



- b) Solid particles dispersed throughout a liquid
- c) Only one liquid phase
- d) A solid phase dissolved in a gas

#### 21. Advantages of suspensions include:

- a) Difficulty in measuring accurate doses
- b) Masking unpleasant taste of some drugs, prolonged or controlled release
- c) Increased chance of medication errors
- d) Short shelf life

#### 22. Disadvantages of suspensions include:

- a) Easy and accurate administration
- b) Bulky storage, potential for settling and caking
- c) Reduced risk of side effects
- d) Faster absorption compared to other forms

#### 23. Suspensions can be classified based on:

- a) Color and taste only
- b) Particle size, concentration, and intended use
- c) Brand name of the medication
- d) Expiry date of the ingredients

#### 24. Flocculated suspensions have:

- a) Evenly dispersed particles
- b) Particles that clump together but can be easily redispersed



- c) Particles that settle rapidly and form a hard cake
- d) A strong unpleasant odor

#### **25. Deflocculated suspensions have:**

- a) Evenly dispersed particles
- b) Particles that tend to clump together
- c) Particles that settle rapidly and form a hard cake
- d) A thick, viscous consistency

#### 26. In preparing suspensions, wetting agents are used to:

- a) Increase the cost of the medication
- b) Improve the interaction between the solid particles and the liquid
- c) Change the color of the suspension
- d) Mask the unpleasant taste of the medication

#### 27. Suspending agents are used in suspensions to:

- a) Dissolve the medication completely
- b) Prevent settling of the solid particles
- c) Thicken the consistency of the suspension
- d) Shorten the shelf life of the medication

#### 28. When dispensing suspensions, pharmacists should instruct patients to:

- a) Swallow the medication without shaking the bottle
- b) Shake the bottle well before each use to ensure uniform distribution
- c) Store the suspension in direct sunlight



d) Discard any leftover suspension after completing the course of treatment

# **29.** Pharmacists should be aware of the potential for medication errors with suspensions due to:

- a) Easy and convenient administration
- b) Difficulty in measuring accurate doses, especially for thick suspensions
- c) Faster absorption compared to other dosage forms
- d) Reduced risk of side effects

#### **30.** Proper storage of suspensions is crucial to maintain:

- a) The unpleasant taste of the medication
- b) The potency, stability, and effectiveness of the medication
- c) The color of the suspension
- d) The marketing appeal of the medication

#### 31. Suspensions can be a valuable dosage form for patients who have difficulty with:

- a) Reading medication labels only
- b) Swallowing solid dosage forms
- c) Applying topical creams
- d) Remembering to take medication at specific times

#### 32. Pharmacists play a role in ensuring the safe and effective use of suspensions by:

- a) Focusing on brand promotion only
- b) Providing accurate information and counseling to patients on proper use and storage
- c) Delegating all dispensing tasks to pharmacy technicians
- d) Rushing patients through the dispensing process



#### 33. When dispensing suspensions, pharmacists should consider the:

- a) Patient's age and preferences only
- b) Patient's age, medical condition, and potential for medication interactions
- c) Expiry date of the medication only

#### 34. Suspensions may require special instructions for administration, such as:

- a) Taking the medication with a full glass of milk
- b) Following specific timelines for administration in relation to food intake
- c) Crushing the medication before mixing with liquid
- d) Exposing the suspension to sunlight before use

#### 35. Pharmacists can utilize technology, such as calibrated measuring devices, to:

- a) Increase medication costs for patients
- b) Improve the accuracy of dispensing suspension doses
- c) Recommend unnecessary medications
- d) Replace the need for pharmacist counseling

# **36.** By understanding the properties of suspensions, pharmacists can select the most appropriate:

- a) Marketing strategy for the medication
- b) Dosage form, excipients, and storage recommendations for optimal stability
- c) Color and flavor for the suspension
- d) Brand of medication based on price only

#### **37. Flocculated suspensions have:**



- a) Evenly dispersed particles
- b) Particles that clump together but can be easily redispersed
- c) Particles that settle rapidly and form a hard cake
- d) A strong unpleasant odor

#### **38. Deflocculated suspensions have:**

- a) Evenly dispersed particles
- b) Particles that tend to clump together
- c) Particles that settle rapidly and form a hard cake
- d) A thick, viscous consistency

#### **39. Flocculated suspensions are generally:**

- a) More stable than deflocculated suspensions
- b) Less stable than deflocculated suspensions
- c) Equally stable as deflocculated suspensions
- d) Not affected by stability issues

#### 40. Stability problems in suspensions can include:

- a) Increased potency over time
- b) Sedimentation, caking, and creaming
- c) A pleasant taste developing in the suspension
- d) Faster absorption by the body

#### 41. Sedimentation in suspensions refers to:

a) The medication dissolving completely in the liquid



- b) The settling of solid particles at the bottom of the container
- c) A change in the color of the suspension
- d) The medication becoming more effective over time

#### 42. Caking in suspensions refers to:

- a) The formation of a hard mass of settled particles
- b) The medication dissolving completely in the liquid
- c) A change in the odor of the suspension
- d) The medication becoming more stable over time

#### 43. Creaming in suspensions refers to:

- a) The formation of a hard mass of settled particles
- b) The rise of larger particles to the top of the suspension
- c) A change in the taste of the suspension
- d) The medication becoming less effective over time

#### 44. Methods to overcome stability problems in suspensions can include:

- a) Adding coloring agents to improve appearance
- b) Using suspending agents to prevent settling
- c) Increasing the concentration of the medication
- d) Exposing the suspension to direct sunlight

#### 45. Selecting appropriate suspending agents is crucial for:

- a) Masking the taste of the medication only
- b) Maintaining the uniform distribution of particles and preventing settling



- c) Changing the color of the suspension
- d) Shortening the shelf life of the medication

#### 46. Flocculated suspensions may be preferred when:

- a) A rapid onset of action is desired
- b) Long-term stability and ease of redispersion are important
- c) The medication has an unpleasant taste
- d) The suspension needs to be clear and transparent

#### 47. Deflocculated suspensions may be preferred when:

- a) A rapid onset of action is desired
- b) The medication needs to be clear and transparent
- c) Long-term stability and ease of redispersion are important
- d) The suspension needs to be thick and viscous

#### 48. Pharmacists need to consider the desired properties of the suspension when:

- a) Choosing a brand name for the medication
- b) Selecting the appropriate dosage form and excipients
- c) Focusing on marketing the medication to patients
- d) Delegating all suspension preparation to technicians

#### 49. Understanding flocculation and deflocculation is important for pharmacists to:

- a) Increase medication costs
- b) Formulate stable and effective suspensions
- c) Recommend unnecessary medications to patients



d) Reduce the need for patient counseling

#### 50. By selecting the appropriate formulation approach, pharmacists can ensure:

- a) Faster expiration of the suspension
- b) The medication has a strong unpleasant taste
- c) The suspension is effective and safe for patients
- d) The suspension is more expensive to produce

#### **51.** Factors affecting the stability of suspensions include:

a) Brand name of the medication onlyb) Particle size, density difference between solid and liquid, and interactions between particles and suspending agents

- c) Color and flavor of the suspension
- d) Expiry date of the medication only

#### 52. Flocculated suspensions may be less desirable for:

- a) Long-term storage and ease of redispersion
- b) Masking the unpleasant taste of some medications
- c) Delivering a rapid onset of action
- d) Offering a clear and aesthetically pleasing appearance

#### 53. Deflocculated suspensions may be less desirable for:

- a) Long-term storage and ease of redispersion
- b) Delivering a sustained or controlled release of medication
- c) Offering a clear and aesthetically pleasing appearance
- d) Masking the unpleasant taste of some medications



### 54. Pharmacists can assess the stability of a suspension by:

- a) Relying solely on the expiry date
- b) Visually inspecting the suspension for signs of settling or caking
- c) Asking patients about their experience with the medication
- d) Ignoring any potential stability issues

#### 55. When encountering stability problems with a suspension, pharmacists may:

a) Recommend a different brand of medication without considering the formulation

b) Explore alternative formulation approaches or recommend shaking the suspension more frequently

- c) Advise patients to continue using the suspension even if it shows signs of instability
- d) Discard the suspension without offering any solutions to the patient

#### 56. Emulsions are dispersions of:

- a) Two gases
- b) Two immiscible liquids where one is dispersed as droplets in the other
- c) A solid dissolved in a liquid
- d) A gas in a liquid

#### 57. Emulsions can be classified based on:

- a) Color and taste only
- b) The dispersed phase and continuous phase
- c) Brand name of the ingredients
- d) Expiry date of the medication

#### 58. Oil-in-water (O/W) emulsions have:



- a) Water droplets dispersed in oil
- b) Oil droplets dispersed in water
- c) Both oil and water phases equally dispersed
- d) No dispersed phase

#### 59. Water-in-oil (W/O) emulsions have:

- a) Water droplets dispersed in oil
- b) Oil droplets dispersed in water
- c) Both oil and water phases equally dispersed
- d) No dispersed phase

#### 60. Emulsifying agents are substances that:

- a) Increase the cost of the emulsion
- b) Reduce the interfacial tension between the two phases, promoting stability
- c) Change the color of the emulsion
- d) Mask the unpleasant taste of the medication

#### 61. Identifying the type of emulsion (O/W or W/O) can be achieved by:

- a) Tasting the emulsion
- b) Using conductivity measurements
- c) Checking the expiry date
- d) Observing the color of the emulsion

#### 62. The dye test for emulsion identification involves:

a) Adding a colored gas to the emulsion



- b) Using a dye that dissolves in the continuous phase, indicating its type (O/W or W/O)
- c) Adding a dye that reacts with the emulsifying agent
- d) Not a reliable method for emulsion identification

#### 63. Common methods for preparing emulsions include:

- a) Heating the ingredients together without proper mixing
- b) Using high-speed homogenization or sonication
- c) Simply mixing the oil and water phases
- d) Grinding the solid ingredients into a fine powder

#### 64. Stability problems in emulsions can include:

- a) Increased potency over time
- b) Coalescence (droplet merging), creaming, and phase separation
- c) A pleasant taste developing in the emulsion
- d) Faster absorption by the body

#### 65. Coalescence in emulsions refers to:

- a) The formation of a solid layer on top of the emulsion
- b) The merging of dispersed phase droplets
- c) A change in the color of the emulsion
- d) The medication becoming more effective over time

#### 66. Creaming in emulsions refers to:

- a) The formation of a solid layer on top of the emulsion
- b) The rise of larger dispersed phase droplets to the top



- c) A change in the taste of the emulsion
- d) The medication becoming less effective over time

#### 67. Phase separation in emulsions refers to:

- a) The formation of a solid layer on top of the emulsion
- b) The complete separation of the oil and water phases
- c) A change in the odor of the emulsion
- d) The medication becoming more stable over time

#### 68. Methods to overcome stability problems in emulsions can include:

- a) Adding coloring agents to improve appearance
- b) Using appropriate emulsifying agents and adjusting the viscosity
- c) Increasing the concentration of the dispersed phase
- d) Exposing the emulsion to extreme temperatures

#### **69.** Other factors affecting emulsion stability include:

- a) Brand name of the medication only
- b) Electrolyte concentration, pH, and temperature
- c) Color and flavor of the emulsion
- d) Expiry date of the medication only

# 70. Pharmacists should counsel patients on the proper storage and handling of emulsions to:

- a) Increase medication costs
- b) Minimize the risk of stability problems and ensure product effectiveness
- c) Recommend unnecessary medications



d) Reduce the need for patient counseling

## 71. Proper storage instructions for emulsions may include:

- a) Exposing the emulsion to direct sunlight
- b) Storing the emulsion upright at room temperature
- c) Shaking the emulsion vigorously before every use
- d) Discarding any leftover emulsion after completing the treatment

### 72. By understanding emulsions and their properties, pharmacists can:

- a) Recommend alternative medications without considering the formulation
- b) Select appropriate storage recommendations and counsel patients for optimal use
- c) Focus solely on marketing different emulsion products
- d) Dispense emulsions without considering potential stability issues

#### Answers

- 1. Monophasic liquids refer to: b) True solutions with a single, uniform phase
- 2. Gargles are: b) Used to cleanse and soothe the throat
- 3. **Common ingredients in gargles may include:** b) Antiseptics, analgesics, or flavorings
- 4. **Mouthwashes are used for:** b) Freshening breath, reducing plaque, and promoting oral hygiene
- 5. Mouthwashes may contain ingredients like: b) Fluoride for strengthening teeth
- 6. **Throat paints are:** b) Viscous liquids applied directly to a sore throat for localized relief
- 7. Throat paints may contain: b) Local anesthetics for pain relief
- 8. Eardrops are used to: b) Treat infections or soften earwax in the ear canal
- 9. Eardrops may contain: b) Antibiotics or corticosteroids for ear infections
- 10. Monophasic liquids offer advantages like: b) Ease of use, rapid onset of action, and good bioavailability
- 11. When preparing monophasic liquids, pharmacists should ensure: b) The ingredients are compatible and form a stable solution
- 12. **Monophasic liquids may require the use of:** b) Preservatives to prevent microbial growth, especially for multi-use solutions

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- 13. **Pharmacists should counsel patients on the proper use of monophasic liquids, including:** b) Following specific instructions for gargling, swishing, or instillation
- 14. It is important to advise patients to: b) Discontinue use if they experience any side effects and consult a healthcare professional
- 15. Monophasic liquids can be a valuable option for patients who have difficulty with: b) Swallowing solid dosage forms
- 16. Pharmacists play a crucial role in ensuring the safe and effective use of monophasic liquids by: b) Providing accurate information and counseling to patients
- 17. When dispensing monophasic liquids, pharmacists should consider the: b) Patient's age, medical condition, and potential drug interactions
- 18. Monophasic liquids may have potential risks, such as: b) Accidental ingestion, especially for solutions intended for topical use
- 19. **Pharmacists can help mitigate risks by:** b) Providing clear instructions and warnings on the medication label
- 20. **Suspensions are heterogeneous mixtures containing:** b) Solid particles dispersed throughout a liquid
- 21. Advantages of suspensions include: b) Masking unpleasant taste of some drugs, prolonged or controlled release
- 22. **Disadvantages of suspensions include:** b) Bulky storage, potential for settling and caking
- 23. Suspensions can be classified based on: b) Particle size, concentration, and intended use
- 24. **Flocculated suspensions have:** b) Particles that clump together but can be easily redispersed
- 25. **Deflocculated suspensions have:** c) Particles that settle rapidly and form a hard cake
- 26. **In preparing suspensions, wetting agents are used to:** b) Improve the interaction between the solid particles and the liquid
- 27. Suspending agents are used in suspensions to: b) Prevent settling of the solid particles
- 28. When dispensing suspensions, pharmacists should instruct patients to: b) Shake the bottle well before each use to ensure uniform distribution
- 29. Pharmacists should be aware of the potential for medication errors with suspensions due to: b) Difficulty in measuring accurate doses, especially for thick suspensions
- 30. **Proper storage of suspensions is crucial to maintain:** b) The potency, stability, and effectiveness of the medication
- 31. Suspensions can be a valuable dosage form for patients who have difficulty with:b) Swallowing solid dosage forms
- 32. Pharmacists play a role in ensuring the safe and effective use of suspensions by:b) Providing accurate information and counseling to patients on proper use and storage
- 33. When dispensing suspensions, pharmacists should consider the: b) Patient's age, medical condition, and potential for medication interactions
- 34. **Suspensions may require special instructions for administration, such as:** b) Following specific timelines for administration in relation to food intake
- 35. **Pharmacists can utilize technology, such as calibrated measuring devices, to:** b) Improve the accuracy of dispensing suspension doses
- 36. By understanding the properties of suspensions, pharmacists can select the most appropriate: b) Dosage form, excipients, and storage recommendations for optimal stability

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- 37. Flocculated suspensions have: b) Particles that clump together but can be easily redispersed
- 38. **Deflocculated suspensions have:** c) Particles that settle rapidly and form a hard cake
- 39. Flocculated suspensions are generally: a) More stable than deflocculated suspensions
- 40. **Stability problems in suspensions can include:** b) Sedimentation, caking, and creaming
- 41. **Sedimentation in suspensions refers to:** b) The settling of solid particles at the bottom of the container
- 42. Caking in suspensions refers to: a) The formation of a hard mass of settled particles
- 43. Creaming in suspensions refers to: b) The rise of larger particles to the top of the suspension
- 44. **Methods to overcome stability problems in suspensions can include:** b) Using suspending agents to prevent settling
- 45. Selecting appropriate suspending agents is crucial for: b) Maintaining the uniform distribution of particles and preventing settling
- 46. Flocculated suspensions may be preferred when: b) Long-term stability and ease of redispersion are important
- 47. **Deflocculated suspensions may be preferred when:** a) A rapid onset of action is desired
- 48. **Pharmacists need to consider the desired properties of the suspension when:** b) Selecting the appropriate dosage form and excipients
- 49. Understanding flocculation and deflocculation is important for pharmacists to:b) Formulate stable and effective suspensions
- 50. By selecting the appropriate formulation approach, pharmacists can ensure: c) The suspension is effective and safe for patients
- 51. Factors affecting the stability of suspensions include: b) Particle size, density difference between solid and liquid, and interactions between particles and suspending agents
- 52. Flocculated suspensions may be less desirable for: d) Offering a clear and aesthetically pleasing appearance
- 53. **Deflocculated suspensions may be less desirable for:** a) Long-term storage and ease of redispersion
- 54. **Pharmacists can assess the stability of a suspension by:** b) Visually inspecting the suspension for signs of settling or caking
- 55. When encountering stability problems with a suspension, pharmacists may: b) Explore alternative formulation approaches or recommend shaking the suspension more frequently
- 56. **Emulsions are dispersions of:** b) Two immiscible liquids where one is dispersed as droplets in the other
- 57. Emulsions can be classified based on: b) The dispersed phase and continuous phase
- 58. Oil-in-water (O/W) emulsions have: b) Oil droplets dispersed in water
- 59. Water-in-oil (W/O) emulsions have: a) Water droplets dispersed in oil
- 60. **Emulsifying agents are substances that:** b) Reduce the interfacial tension between the two phases, promoting stability
- 61. Identifying the type of emulsion (O/W or W/O) can be achieved by: b) Using conductivity measurements
- 62. **The dye test for emulsion identification involves:** b) Using a dye that dissolves in the continuous phase, indicating its type (O/W or W/O)



- 63. **Common methods for preparing emulsions include:** b) Using high-speed homogenization or sonication
- 64. **Stability problems in emulsions can include:** b) Coalescence (droplet merging), creaming, and phase separation
- 65. Coalescence in emulsions refers to: b) The merging of dispersed phase droplets
- 66. **Creaming in emulsions refers to:** b) The rise of larger dispersed phase droplets to the top
- 67. **Phase separation in emulsions refers to:** b) The complete separation of the oil and water phases
- 68. Methods to overcome stability problems in emulsions can include: b) Using appropriate emulsifying agents and adjusting the viscosity
- 69. Other factors affecting emulsion stability include: b) Electrolyte concentration, pH, and temperature
- 70. Pharmacists should counsel patients on the proper storage and handling of emulsions to: b) Minimize the risk of stability problems and ensure product effectiveness
- 71. **Proper storage instructions for emulsions may include:** b) Storing the emulsion upright at room temperature
- 72. By understanding emulsions and their properties, pharmacists can: b) Select appropriate storage recommendations and counsel patients for optimal use