

MCQs (Circle the correct answer)

1. Which of the following BEST describes the primary pharmaceutical purpose of creams as semisolid dosage forms?
 - A. To provide systemic drug delivery exclusively through oral absorption
 - B. To act as topical vehicles that deliver drugs and provide protective and moisturizing effects on the skin
 - C. To replace injectable dosage forms in all dermatological conditions
 - D. To enhance only the aesthetic appearance of the skin without therapeutic value
2. Oil-in-water (O/W) creams are generally preferred in cosmetic applications because they:
 - A. Are highly greasy and difficult to wash off
 - B. Form an occlusive barrier that prevents all water loss
 - C. Are less greasy and can be easily removed with water
 - D. Contain only oil as the continuous phase
3. Which of the following statements BEST explains why water-in-oil (W/O) creams are beneficial for dry skin conditions?
 - A. They rapidly evaporate after application
 - B. They increase water loss from the skin
 - C. They reduce water evaporation and enhance skin hydration
 - D. They dissolve completely in sweat
4. In cold cream formulation, the emulsifying agent is formed due to the reaction between:
 - A. Mineral oil and water
 - B. Sodium borate and free fatty acids in beeswax
 - C. Stearic acid and propylene glycol
 - D. White petrolatum and purified water
5. Which ingredient in cold cream primarily acts as an oleaginous vehicle and emollient?
 - A. Sodium borate
 - B. Mineral oil
 - C. White wax
 - D. Purified water
6. The term "vanishing cream" originated because:
 - A. It changes color after application
 - B. It solidifies immediately on the skin

- C. Water evaporates quickly leaving a thin film
 - D. It penetrates into the bloodstream instantly
7. Which of the following ingredients in vanishing cream acts as a humectant?
- A. Stearic acid
 - B. White wax
 - C. Propylene glycol
 - D. Triethanolamine
8. Triethanolamine in vanishing cream is mainly used as:
- A. Preservative
 - B. Fragrance
 - C. Part of emulsifying agent
 - D. Coloring agent
9. Which type of cream is considered non-occlusive?
- A. Water-in-oil cream
 - B. Oil-in-water cream
 - C. Cold cream
 - D. Oleaginous ointment
10. Why are hydrophobic drugs released more readily from W/O creams?
- A. Because water phase dominates
 - B. Because oil is the internal phase
 - C. Because oil is the external continuous phase
 - D. Because they dissolve in water
11. Which step is critical to ensure proper emulsification during cream preparation?
- A. Cooling immediately without mixing
 - B. Mixing phases at significantly different temperatures
 - C. Combining both phases while warm and stirring continuously
 - D. Avoiding heating altogether
12. Spermaceti in cold cream serves primarily as:
- A. Preservative
 - B. Emollient and stiffening agent
 - C. Humectant

D. Solvent

13. Which of the following best describes the texture of a properly prepared cream?

- A. Gritty with visible particles
- B. Hard and brittle
- C. Uniform and smooth without particles
- D. Completely liquid

14. What is the main function of sodium borate in cold cream?

- A. Coloring agent
- B. Part of emulsifying system
- C. Thickener only
- D. Preservative

15. Which cream type is more effective in cleansing the skin?

- A. O/W cream
- B. W/O cream
- C. Gel
- D. Lotion

16. Why does increased skin hydration enhance drug penetration?

- A. It decreases permeability
- B. It increases skin barrier thickness
- C. It raises skin permeability
- D. It blocks pores

17. What is the recommended storage condition for creams?

- A. Freezing temperature
- B. Extremely high temperature
- C. Room temperature or cool place
- D. Direct sunlight exposure

18. Which labeling statement is essential for creams?

- A. For oral use only
- B. For injection only
- C. For external use only
- D. For veterinary use only

19. The beyond-use date for the prepared cream is typically:

- A. 7 days
- B. 1 year
- C. 30 days or duration of therapy
- D. Unlimited

20. Which of the following best summarizes the historical/pharmaceutical importance of creams?

- A. They are modern forms replacing all traditional dosage forms
- B. They have long been used as topical preparations combining therapeutic and cosmetic benefits
- C. They are only used in industrial manufacturing
- D. They are not used in modern pharmacy

Fill in the blanks

1. Creams are _____ dosage forms intended for application to the skin.
2. Oil-in-water creams have oil dispersed in a continuous _____ phase.
3. Cold cream is an example of a _____ type emulsion.
4. The emulsifier in cold cream is formed by reaction between sodium borate and _____.
5. Vanishing cream is classified as an _____ emulsion.
6. Propylene glycol acts as a _____ agent.
7. Increased hydration of the skin enhances drug _____.
8. The final cream should be _____ and free from visible particles.
9. Creams should be labeled "For _____ use only."
10. The beyond-use date is typically _____ days.

Answer Key

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

10. C

11. C

12. B

13. C

14. B

15. B

16. C

17. C

18. C

19. C

20. B

1. Semisolid

2. Aqueous

3. W/O

4. Beeswax

5. O/W

6. Humectant

7. Penetration

8. Uniform

9. External

10. 30