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D. Pharm Exit Exam 2024

Course Name	: D. Pharm
Year	: First Year
Subject Name	: Pharmaceutics
Topic Name	: EMULSION

MULTIPLE CHOICE QUESTIONS

1. What is the definition of an emulsion?

- a) A solution of a solute in a solvent
- b) A dispersion of one liquid phase in another immiscible liquid phase
- c) A suspension of solid particles in a liquid medium
- d) A colloidal system of dispersed solid particles in a liquid medium

Answer: b) A dispersion of one liquid phase in another immiscible liquid phase

2. What is the term for the liquid phase that is dispersed in an emulsion?

- a) Emulsifier
- b) Emulsion
- c) Continuous phase
- d) Dispersed phase

Answer: d) Dispersed phase

3. Which of the following is NOT an example of an emulsifying agent?

- a) Sodium lauryl sulfate
- b) Lecithin
- c) Glycerin
- d) Span 80

Answer: c) Glycerin

4. What is the primary role of an emulsifying agent in an emulsion?

- a) To increase the viscosity of the emulsion
- b) To stabilize the emulsion by preventing the coalescence of dispersed droplets
- c) To enhance the taste of the emulsion
- d) To decrease the particle size of the dispersed phase

Answer: b) To stabilize the emulsion by preventing the coalescence of dispersed droplets

5. Which of the following types of emulsions is thermodynamically unstable?

- a) Oil-in-water (O/W) emulsion
- b) Water-in-oil (W/O) emulsion
- c) Multiple emulsion
- d) Microemulsion

Answer: c) Multiple emulsion

6. The term "HLB" stands for:

- a) Hydrophobic Lipophilic Balance
- b) High Lipophilic Base
- c) Hydrophilic Lipophilic Balance
- d) High Lipid Barrier

Answer: c) Hydrophilic Lipophilic Balance

7. What is the purpose of calculating the Hydrophilic Lipophilic Balance (HLB) of an emulsifying agent?

- a) To determine the shelf life of the emulsion
- b) To predict the type of emulsion that will form
- c) To estimate the viscosity of the emulsion
- d) To assess the color stability of the emulsion

Answer: b) To predict the type of emulsion that will form

8. Which of the following methods is used to prepare emulsions by mechanical means?

- a) Fusion method
- b) Dry gum method
- c) Continental or dry gum method
- d) Homogenization method

Answer: d) Homogenization method

9. What is the term for the process of breaking down large droplets into smaller ones in an emulsion?

- a) Coalescence
- b) Flocculation
- c) Ostwald ripening
- d) Homogenization

Answer: d) Homogenization

10. Which of the following factors can affect the stability of an emulsion?

- a) pH of the continuous phase
- b) Temperature
- c) Concentration of emulsifying agent
- d) All of the above

Answer: d) All of the above

11. Which of the following is NOT a method used to evaluate the physical stability of emulsions?

- a) Centrifugation
- b) Optical microscopy
- c) Rheological measurements
- d) Gas chromatography

Answer: d) Gas chromatography

12. What is the term for the process of separating the phases of an emulsion under the influence of gravity?

- a) Centrifugation
- b) Sedimentation
- c) Flocculation

d) Coalescence

Answer: b) Sedimentation

13. Which of the following types of emulsions is commonly used in food products like mayonnaise?

a) Oil-in-water (O/W) emulsion

b) Water-in-oil (W/O) emulsion

c) Multiple emulsion

d) Microemulsion

Answer: b) Water-in-oil (W/O) emulsion

14. Which method of emulsion preparation involves the use of heat to melt the dispersed phase and then mix it with the continuous phase?

a) Fusion method

b) Dry gum method

c) Wet gum method

d) Homogenization method

Answer: a) Fusion method

15. What is the term for the process of dispersed droplets coming together to form larger droplets in an emulsion?

a) Coalescence

b) Flocculation

c) Ostwald ripening

d) Homogenization

Answer: a) Coalescence

16. Which of the following is an example of an emulsifying agent used in pharmaceuticals?

a) Sodium lauryl sulfate

b) Lecithin

c) Span 80

d) All of the above

Answer: d) All of the above

17. Which type of emulsion is formed when the dispersed phase is in the form of small droplets suspended in the continuous phase?

a) Macroemulsion

b) Microemulsion

c) Nanoemulsion

d) Multiple emulsion

Answer: c) Nanoemulsion

18. Which of the following factors can influence the rate of creaming in an emulsion?

a) Viscosity of the continuous phase

b) Particle size of the dispersed phase

- c) Temperature
- d) All of the above

Answer: d) All of the above

19. What is the term for the phenomenon where small droplets of the dispersed phase come together to form larger droplets in an emulsion?

- a) Coalescence
- b) Flocculation
- c) Ostwald ripening
- d) Homogenization

Answer: a) Coalescence

20. Which of the following is NOT a method used to stabilize emulsions?

- a) Using an emulsifying agent
- b) Increasing the temperature of the emulsion
- c) Reducing the interfacial tension between the phases
- d) Adding a thickening agent

Answer: b) Increasing the temperature of the emulsion