

Physical Pharmaceutics I_BP 302 T

B.Pharmacy Second Internal Examination 2020-2021

Date: 14-08-2020

Semester : 3

Subject: Physical Pharmaceutics I

INSTRUCTIONS:

1.All questions are Compulsory

2.Each question carries 1 mark

* Required

1. Email address *

2. Enrollment No: *

3. Full Name of the Student *

4. 1. Span 40 is dissolved in paraffin oil. At slightly above the critical micelle concentration, the arrangement of span molecules is *

Mark only one oval.

- ☐ Head face the center of the micelle
- ☐ laminar arrangement
- ☐ tails face the air at the interface
- ☐ tail face the center of the micelle

5. 2. Near critical micelle concentration micelles of the surfactant molecules assume the shape of *

Mark only one oval.

- ☐ Cylindrical
- ☐ Layered
- ☐ Rod-shaped
- ☐ Spherical

6. 3. Polysorbate 80(Tween 80) is a surfactant of type *

Mark only one oval.

- ☐ amphi-ionic
- ☐ anionic
- ☐ cationic
- ☐ non-ionic

7. 4. Micelles are observed in water, when the added surfactant is within a particular concentration range.the concentration range should be *

Mark only one oval.

- ☐ equal to and less than cmc
- ☐ equal to and more than cmc
- ☐ equal to cmc
- ☐ more than cmc

8. 5. At concentration below cmc the surfactant molecules remain *

Mark only one oval.

- ☐ above the surface of water
☐ at water air interface
☐ in the bulk of the water
☐ uniform in bulk and interface

9. 6. Which is an example of cationic surfactant *

Mark only one oval.

- ☐ Benzalkonium chloride
☐ Polysorbate 80
☐ Sodium lauryl sulphate
☐ sorbiton monooleate

10. 7. which one of the following emulsifier is used to stabilize the emulsion of water in oil type *

Mark only one oval.

- ☐ sodium lauryl sulphate
☐ Span 20
☐ Tragacanth
☐ Tween 80

11. 8. The HLB range for lipophilic surfactant is *

Mark only one oval.

- ☐ 2 to 9
☐ 9 to 16
☐ 16 to 20
☐ above 20

12. 9. Which one of the following substances decreases the surface tension of water *

Mark only one oval.

- ☐ Lecithin
☐ Methanol
☐ Sodium chloride
☐ Sucrose

13. 10. for the wetting of a solid by liquids, the contact angle should have a value nearly *

Mark only one oval.

- ☐ 0
☐ 90
☐ 180
☐ 270

14. 11. When cetyl alcohol is added to water it appears on the water surface as *

Mark only one oval.

- ☐ Duplex film
☐ insoluble monolayer
☐ Lens
☐ Soluble monolayer

15. 12. Surface tension is a *

Mark only one oval.

- ☐ capacity factor
- ☐ extensive property
- ☐ intensive property
- ☐ tolerance factor

16. 13. Solid/solid interfaces are important in *

Mark only one oval.

- ☐ emulsions
- ☐ pastes
- ☐ suspensions
- ☐ tablets

17. 14. Surface tension is defined as change in the surface free energy per unit change in *

Mark only one oval.

- ☐ area
- ☐ density
- ☐ length
- ☐ volume

18. 15. Liquids exhibit high surface tension due to *

Mark only one oval.

- ☐ adhesive forces, Strong
- ☐ adhesive forces, weak
- ☐ cohesive forces, Strong
- ☐ cohesive forces, weak

19. 16. When the distilled water is in contact with a clean glass capillary, the $\cos \theta$ is *

Mark only one oval.

- ☐ 180
- ☐ 90
- ☐ one
- ☐ zero

20. 17. What are the units of surface tension in SI units *

Mark only one oval.

- ☐ debye
- ☐ dy/cm
- ☐ mN/m
- ☐ Pa.s

21. 18. The higher the cohesive forces the greater the physical property. Identify. *

Mark only one oval.

- ☐ Dipole moment
- ☐ Optical rotation
- ☐ Refractive index
- ☐ Surface tension

22. 19. The rise of liquid in capillary tube does NOT depend on *

Mark only one oval.

- ☐ Atmospheric pressure
- ☐ Density of liquid
- ☐ Radius of the capillary
- ☐ temperature

23. 20. Rain drops are spherical, because of the following reasons *

Mark only one oval.

- ☐ air resistance
- ☐ gravity
- ☐ low viscosity of water
- ☐ surface tension

24. 21. Polyvinyl pyrrolidone (PVP) is water soluble polymer and forms a water soluble complex with *

Mark only one oval.

- ☐ Iodine
- ☐ Cisplatin
- ☐ Salicylic acid
- ☐ lead

25. 22. intermolecular forces involved in the formation of complexes are *

Mark only one oval.

- ☐ Covalent bonds
- ☐ van der Waals forces of dispersion
- ☐ Ion-dipole
- ☐ all the above

26. 23. Absorption of tetracyclins was when co administered with divalent cations *

Mark only one oval.

- ☐ increased
- ☐ decreased
- ☐ unaffected
- ☐ none of the above

27. 24. In an aerosol system propellant is available in one of the following forms at ambient conditions *

Mark only one oval.

- ☐ Gas
- ☐ Gas and liquid
- ☐ Gas, Liquid, and Solid
- ☐ Liquid

28. 25. Description of outer appearance of the crystal is *

Mark only one oval.

- ☐ Crystal habit
- ☐ law of crystallography
- ☐ crystal system
- ☐ interfacial angle

29. 26. Amount of water vapour present in the moist air per unit mass of dry air in a given volume is *

Mark only one oval.

- ☐ Humidity
☐ isomorphism
☐ Fusion Temp
☐ Eutectic Mixture

30. 27. Inclusion complex of beta cyclodextrin with nitroglycerin makes it *

Mark only one oval.

- ☐ More soluble
☐ Improves stability
☐ Explosion proof
☐ Antibacterial

31. 28. Vit A and D are stabilized chemically by complexation with *

Mark only one oval.

- ☐ Beta cyclodextrins
☐ caffeine
☐ ions
☐ iron

32. 29. A solid having undefined shape is known as *

Mark only one oval.

- ☐ amorphous
☐ Anisotropic
☐ Crystalline
☐ Isomorphic

33. 30. Glass is an example for *

Mark only one oval.

- ☐ crystalline solid
☐ liquid crystal
☐ non crystalline solid
☐ super cooled liquids

34. 31. The existence of a molecule in more than one solid modification is known as *

Mark only one oval.

- ☐ Allotropy
☐ amorphism
☐ isomorphism
☐ polymorphism

35. 32. Which of the following is a molecular solid *

Mark only one oval.

- ☐ Dimond
☐ Ice
☐ Magnesium oxide
☐ Sodium hydroxide

36. 33. The characteristic feature so a solid are *

Mark only one oval.

- ☐ definite shape
☐ definite shape and size
☐ definite shape, size and rigidity
☐ definite shape, size, rigidity and fluidity

37. 34. A sharp melting point of a crystalline solid is due to *

Mark only one oval.

- ☐ Definite arrangement of constituent particles in different direction
- ☐ Irregular arrangement of constituent particles
- ☐ low void volume in the crystal lattice
- ☐ same arrangement of constituent particle in all directions

38. 35. Which component of aerosol system is responsible for expelling the contents *

Mark only one oval.

- ☐ Actuator
- ☐ Drug product
- ☐ Propellant
- ☐ valve

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