

Final Year B. Pharm CBCS (Semester VIII)
Pharmaceutics IV Theory Examination
ACADEMIC YEAR 2019-2020
MOCK QUESTIONS

Cluster 1

1. Sealed glass containers with an elongated neck
 - a. Gauge
 - b. Ampules
 - c. CSP
 - d. Vial

2. A high efficiency air filter
 - a. HEPA filter
 - b. Diluent
 - c. Final filter
 - d. Web filter

3. A solvent that dissolves a lyophilized powder or dilutes a solution
 - a. Diluent
 - b. Solvent
 - c. Additive
 - d. Admixture

4. Movement of particles in a solution through permeable membranes
 - a. Filter
 - b. Dialysis
 - c. Flow rate
 - d. Anhydrous

5. Methods that maintain sterility products
 - a. Aseptic technique
 - b. Bleaching
 - c. A clean person
 - d. Admixture

6. Which of the following route has rapid onset of action
 - a. Parenteral
 - b. Oral
 - c. Transdermal

- d. Rectal
7. What percentage of NaCl is isotonic with eyes
 - a. 0.5%
 - b. 0.9
 - c. 1.9
 - d. 5
 8. Tears have pH of about
 - a. 5.4
 - b. 6.4
 - c. 7.4
 - d. 8.4
 9. What percentage of boric acid seems to be isotonic with eyes
 - a. 0.9
 - b. 1.9
 - c. 0.5
 - d. 2.9
 10. Which layer of eye is also called as white of eye
 - a. cornea
 - b. Sclera
 - c. Iris
 - d. Retina
 11. WFI contains bacteriostatic agents when in containers of
 - a. 100ml of less
 - b. 30ml of less
 - c. 50ml of less
 - d. 10ml of less
 12. Parenteral in the form suspension are usually given by
 - a. IV
 - b. SC or IM
 - c. ID
 - d. IA
 13. Which of the following used as enteric resin in microencapsulation
 - a. stearic acid

- b. PVA
 - c. Cellulose acetate phthalate
 - d. Ethyl cellulose
14. Which of the following is not a water soluble coating material
- a. Ethyl cellulose
 - b. CMC
 - c. PVP
 - d. Gelatin
15. Which of the following is not used as thickening agent in ophthalmic products
- a. Methyl cellulose
 - b. CMC
 - c. Ethyl cellulose
 - d. PEG
16. Most commonly used preservative in ophthalmic preparation is
- a. Chlorobutanol
 - b. Phenyl mercuric acetate
 - c. Phenyl mercuric nitrite
 - d. Benzalkonium choride
17. Which of the following surfactant prefer in ophthalmic due to less irritation?
- a. ionic
 - b. cationic
 - c. amphoteric
 - d. Nonionic
18. The Sterility test of Liquid involves:
- a. Colorimetric Assay
 - b. Guinea Pigs Assay
 - c. Culturing in the fluid thioglycollate medium
 - d. HPLC assay
19. Which of the following is TRUE:
- a. Rabbit pyrogen test is quantitative biologic test
 - b. Pyrogenic effect is high with IM compared to IV injection
 - c. Greater danger of pyrogens exists in LVP's than SVP's
 - d. LAL test is in vivo test
20. Non ionic surfactant vesicles related to:
- a. Liposomes

- b. Niosomes
- c. Nanoparticles
- d. Nanosuspension

21. Powdered glass test challenges the leaching potential of:

- a. Exterior structure of glass
- b. Plastic containers
- c. Interior structure of glass
- d. Intact surface of glass

22. The efficiency of HEPA filter is:

- a. Remove at least 99.97% of airborne particles 0.3 micrometers (μm) in diameter.
- b. Remove at least 100% of airborne particles 0.3 micrometers (μm) in diameter.
- c. Remove at least 99.97% of airborne particles 2 micrometers (μm) in diameter.
- d. Remove at least 97.99% of airborne particles 0.3 micrometers (μm) in diameter.

23. According to IP, the preparation pass the Rabbit Pyrogen test if:

- a. The group of three rabbits does not exceed 0.6°C
- b. The group of three rabbits does not exceed 1.4°C and if the response of individual rabbit is less than 0.3°C
- c. The group of three rabbits does not exceed 1.4°C and if the response of individual rabbit is less than 0.6°C
- d. The group of six rabbits does not exceed 1.4°C and if the response of individual rabbit is less than 0.6°C

24. Which of the following is NOT true about LAL test:

- a. It is an in vivo biological test
- b. It is performed using lysates of amoebocytes of the horseshoe crab (*Limulus Polyphemus*)
- c. It is a biochemical test performed in a test tube
- d. It is simple, rapid and more sensitive (5-10 times) than rabbit pyrogen test

25. As per USP which of the following is correct

- a. WFI should contain NMT 1000 ppm of solids
- b. WFI should contain NMT 100 ppm of solids
- c. WFI should contain NMT 10 ppm of solids
- d. WFI should contain NMT 1 ppm of solids

26. Pyrogens are

- a. nontoxic
- b. thermostable
- c. non-filterable
- d. volatile

27. Cryoprotectants or Lyoprotectants used in freeze dried parenteral products
- Mannitol
 - Starch
 - Magnesium stearate
 - PVP
28. Class 1,00,000 is _____ number of particles of size _____ or larger per cubic foot of air
- 100, 5 μm
 - 1,00,000, 0.5 μm
 - 1000, 0.05 μm
 - 10,000, 0.005 μm
29. Freeze dried injectable products have to be reconstituted with _____ to form solution or suspension for administration
- Sterile Water for Injection
 - Water for Injection
 - Purified water
 - Boiling water
30. Sterility testing of Parenteral products uses Soyabean Casein digest medium for:
- Aspergillus niger
 - Pseudomonas aeruginosa
 - E.coli
 - S. aureus
31. HEPA filters have capacity to retain particles is as small as _____ size of particles with efficiency _____
- 3 μm , 99.97%
 - 0.03 μm , 99.9%
 - 0.003 μm , 99.97%
 - 0.3 μm , 99.99%
32. Lipid layer of tear film contains
- electrolytes
 - Cholesterol esters
 - proteins
 - enzymes
33. Which amongst following is the easy to prepare ophthalmic dosage form.
- suspension

- b. ointment
- c. solution
- d. gel

34. Benzalkonium Chloride is incompatible with

- a. nitrates
- b. cetrimide
- c. sodium oleate
- d. sodium stearate

35. Non-swellable water insoluble polymer

- a. Ethyl cellulose
- b. HPMC
- c. Carbopol
- d. Polycarbophil

36. The building(s) used for the factory shall obey the conditions laid down in the Factories Act,

- a. 1945
- b. 1948
- c. 1947
- d. 1946

37. To prevent any interaction between tank material with the product some tanks are lined with _____ as liners

- a. PVC
- b. polytetrafluoroethylene
- c. Polyester

d. Nylon

38. Prospective validation done when there is a _____ in the manufacturing process

a. consistency

b. change

c. uniformity

d. similarity

39. ----- is used as mucoadhesive polymer.

a. span 80

b. bentonite

c. polysorbate

d Carbopol

40. Which component is a primary requirement of osmotically active drug delivery system?

a. lubricant

b. osmotically active salt

c. disintegrant

d. low density polymer

41. Topical drug delivery systems are used for treating

a. local infections

b. diabetes

c. hypertension

d. hypotension

42. Ocular inserts have following feature:

a. blurred vision

b. low bioavailability

- c. sticking of eyelids
 - d. Increased retention
43. Approach used in colon targeted drug delivery system includes
- a. prodrug
 - b. floating polymers
 - c. low density polymers
 - d. soluble salt
44. In the equation $\log C = \log C_0 - KEt/2.303$, what does C_0 stand for _____
- a. Plasma drug concentration after 60 min of i.v. injection
 - b. Plasma drug concentration after 15 min of i.v. injection
 - c. Plasma drug concentration after 30 min of i.v. injection
 - d. Plasma drug concentration immediately after i.v. injection
45. The i.v. bolus dosage is 500mg and the plasma drug concentration is 0.8 mg/ml. What should be the volume of distribution?
- a. 625 mg/ml
 - b. 625 l
 - c. 625 ml
 - d. 16 mg/ml
46. Grade A aseptic area used for manufacturing of ophthalmic solutions prepared by membrane filtration comprises of :
- a. Not more than 100 particles per cubic meter of size 0.5 microns
 - b. Not more than 100 particles per cubic foot of size 0.5 microns
 - c. Not more than 1000 particles per cubic foot of size 0.5 microns
 - d. Not more than 1000 particles per cubic meter of size 0.5 microns
47. The recommended limits for number of subvisible particles in ophthalmic solutions by light obscuration test as per USP are:
- a. Particles of size ≥ 10 microns : 50 per ml and ≥ 25 microns : 5 per mL
 - b. Particles of size ≥ 20 microns : 50 per ml and ≥ 50 microns : 5 per mL

- c. Particles of size ≥ 50 microns : 50 per ml and ≥ 100 microns : 5 per mL
 - d. Particles of size ≥ 20 microns : 50 per ml and ≥ 100 microns : 5 per mL
48. ----- are materials used for primary packaging of ophthalmic products
- a. Polypropylene, low density polyethylene, high impact polystyrene
 - b. Polyvinyl chloride, Polyvinylidene chloride, high impact polystyrene
 - c. Polyvinyl chloride, Polypropylene, low density polyethylene
 - d. Polyvinyl chloride, high impact polystyrene, polypropylene
49. Some of the common examples of ophthalmic ointment bases are
- a. Lanolin, cetostearyl alcohol, beeswax
 - b. Mineral oil, petrolatum, lanolin
 - c. Beeswax, petrolatum, mineral oil
 - d. Beeswax, cetostearyl alcohol, lanolin
50. The drug of elimination half life upto ----- is an ideal candidate for sustained release dosage forms
- a. 2 – 8 hours
 - b. 6- 10 hours
 - c. Less than 2 hours
 - d. More than 8 hours
51. Hydroxypropyl methyl cellulose, Xanthan gum, Hydroxy ethyl cellulose are some of the examples of polymers used in
- a. Reservoir dissolution controlled systems
 - b. Reservoir diffusion controlled systems
 - c. Matrix dissolution controlled systems
 - d. Matrix diffusion controlled systems
52. The formula for calculation loading dose in sustained release dosage forms is
- a. $C_{ss} V_d / F$
 - b. $C_{ss} K_e T / F$
 - c. $C_{ss} V_d K_e / F$
 - d. $C_{ss} V_d K_e / T F$
53. The mechanism of drug release from reservoir dissolution controlled systems is by
- a. Slow dissolution of coating material
 - b. Swelling of coating material
 - c. Slow dissolution and swelling of coating material
 - d. Swelling and erosion of coating material

54. The steps in sequence involved in microencapsulation by coacervation are
- Phase separation, rigidization and deposition
 - Deposition, rigidization and phase separation
 - Phase separation, deposition and rigidization
 - Rigidization, deposition, phase separation
55. The process variables that affects quality of microencapsulated product prepared by Wurster technique are
- Density
 - Particle size
 - Velocity of atomization air
 - Density, particle size, velocity of atomization air, inlet and outlet temperature
56. Operational qualification of equipment
- After installation and repair
 - During installation
 - After repair
 - Before installation
57. Absolute bioavailability of drug is measured by comparing AUC of drug
- Given by oral route to that by topical route
 - Given by oral route to that by rectal route
 - Given by oral route to that by subcutaneous route
 - Given by oral route to that by intravenous route
58. Pharmacokinetics study involve
- Therapeutic drug monitoring
 - Optimizing dosing strategies
 - Validating safety evaluation parameters
 - Therapeutic drug monitoring, optimizing dosing strategies, validating safety evaluation parameters
59. The pharmacokinetic parameters for drug administered as IV bolus following one compartment open model are
- V_d, CL and AUC
 - T_{max}, CL and AUC
 - C_{max}, CL and AUC
 - C_{max}, T_{max}, CL

60. The equation that best fits the plasma level time curve of azlocillin after an i.v. bolus dose of 2000 mg (assuming one-compartment kinetics) is: $C = 143 e^{-0.87t}$. What will be its apparent volume of distribution?
- 12 liters
 - 8 liters
 - 10 liters
 - 14 liters
61. Freezing point depression is the function of
- No. of particles in the solution
 - Quantity of solution
 - Emulsifying agent
 - Colour
62. Bacterial endotoxin test is used to determine:
- The amount of Pyrogens
 - The level of Pyrogens from Gram negative bacteria
 - The level of bacterial endotoxin from Gram negative bacteria
 - The level of bacterial endotoxin from Gram positive bacteria.
63. Suspension & oily injection can be administered through:
- intravenous
 - intraarterial
 - intramuscular
 - intraspinal
64. Vitamin C is antioxidant because it is
- Acting as reducing agent
 - Acting as blocking agent
 - Acting as complexing agent
 - Acting as sequestering agent
65. In Rotating Basket Apparatus for dissolution studies, Basket of mesh size used -----

- 22 mesh
 - 30 mesh
 - 35 mesh
 - 40 mesh

66. For preparations intended for parenteral administration USP 24 requires the use of -
--- as pharmaceutical aid except.
- Water for injection
 - Sterile water for injection
 - Bacteriostatic water for injection
 - Purified water
67. The DOP test is used for checking the efficiency of
- HEPA filter
 - Membrane Filter
 - Asbestos filter
 - Water filter
68. Non ionic surfactant vesicles related to:
- Liposomes
 - Niosomes
 - Nanoparticles
 - PEGylated Liposome
69. The solution instilled as eye drops into ocular cavity may disappear from the
Precorneal area of the eye by which of the following routes:
- Nasolacrimal drainage
 - Tear Turnover
 - Corneal absorption
 - Nasolacrimal drainage, tear turnover, corneal absorption & conjunctival uptake
70. Which layer is the major rate limiting barrier for permeation of hydrophilic drugs
across the cornea?
- Endothelial barrier
 - Stroma
 - Epithelial barrier
 - Endothelial barrier and Epithelial Barrier
71. One of the organism given below is used as biological indicator in IP for ethylene
oxide sterilization. Choose the correct one:
- Bacillus stearothermophilus
 - Spores of Bacillus subtilis ✓
 - Spores of Bacillus cereus
 - spores of Bacillus stearothermophilus

72. The rate of drug release from dissolution controlled release system does not depend on the following parameters:
- Law of dissolution
 - Surface area
 - Diffusion Coefficient
 - Diffusion layer thickness
73. Which of the following statement is False :
- Drugs that are metabolized before absorption can show increased bioavailability from sustained release formulation.
 - Compound with very low solubility (< 0.01 mg/ml) are will inherently be sustained in GI tract.
 - Compounds that are unstable in small intestine may demonstrate decreased bioavailability when administered from sustained release dosage form.
 - Increase concentration at absorption site will increase the rate of absorption & bioavailability when given by oral SR formulation.
74. All the following viscosity builders have been used in ophthalmic solutions except
- Veegum
 - Methyl Cellulose
 - Polyethylene Glycol
 - polyvinyl alcohol
75. The characteristic of an active transport process include all the following except:
- Active transport moves drug molecules against concentration gradient
 - Follows Ficks First law of diffusion
 - It required energy
 - Active transport of drug molecules may be saturated at high concentrations