Final Year B. Pharm CBCS (Semester VIII)
Pharmaceutics IV Theory Examination
ACADEMIC YEAR 2019-2020
Sample MCQ's

1. 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

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

3. When a solution has an osmolarity equivalent to that of blood
   a. Hypotonic
   b. Isotonic
   c. Hypertonic
   d. Therapeutic

4. Which of the following route has rapid onset of action?
   a. Parenteral
   b. Oral
   c. Transdermal
   d. Rectal

5. What percentage of NaCl is isotonic with eyes
   a. 0.5%
   b. 0.9
   c. 1.9
   d. 5

6. WFI contains bacteriostatic agents when in containers of
   a. 100ml of less
   b. 30ml of less
   c. 50ml of less
   d. 10ml of less

7. Which of the following used as enteric resin in microencapsulation
   a. stearic acid
   b. PVA
   c. Cellulose acetate phthalate

d. Ethyl cellulose

8. The Sterility test of Liquid involves:
   a. Colorimetric Assay
   b. Guinea Pigs Assay
   c. Culturing in the fluid thioglycollate medium
   d. HPLC assay

9. According to IP, the preparation passess 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

10. Which of the following in NOT true about LAL test:
    a. It is a in vivo biological test
    b. It is performed using lysates of amebocytes of the horseshoe crab (Limulus Polyphemus)
    c. It is a biochemical test perfomed in a test tube
    d. It is simple, rapid and more sensitive (5-10 times) than rabbit pyrogen test

11. Pyrogens are
    a. nontoxic
    b. thermostable
    c. non-filterable
    d. volatile

12. Cryoprotectants or Lyoprotectants used in freeze dried parenteral products
    a. Mannitol
    b. Starch
    c. Magnesium stearate
    d. PVP

13. Class 1,00,000 is _____ number of particles of size_____or larger per cubic foot of air
    a. 100, 5 µm
    b. 1,00,000, 0.5 µm
    c. 1000, 0.05 µm
    d. 10,000, 0.005 µm

14. Freeze dried injectable products have to be reconstituted with _____ to form solution or suspension for administration
    a. Sterile Water for Injection
    b. Water for Injection
    c. Purified water
    d. Boiling water

15. Sterility testing of Parenteral products uses Soyabean Casein digest medium for:
    a. Aspergillus niger
    b. Pseudomonas aeruginosa
    c. E.coli
    d. S. aureus

16. HEPA filters have capacity to retain particles is as small as _____size of particles with efficiency _____
    a. 3 μm, 99.97%
    b. 0.03 μm, 99.9%
    c. 0.003 μm, 99.97%
    d. 0.3 μm, 99.99%

17. Lipid layer of tear film contains
    a. electrolytes
    b. Cholesterol esters
    c. proteins
    d. enzymes

18. Which amongst following is the easy to prepare ophthalmic dosage form.

    a. suspension
    b. ointment
    c. solution
    d. gel

19. Benzalkonium Chloride is incompatible with

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

20. Non-swellable water insoluble polymer

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

21. Penn Kinetic system is

    a. Dissolution controlled DDS
    b. Diffusion controlled DDS
    c. Ion exchange DDS
    d. Osmotic DDS

22. State the method of microencapsulation for cinnamon oil.

a. Air suspension coating
b. pan coating
c. coacervation phase separation by salt addition
d. coacervation phase separation by temperature change

23. In case of pan coating method of microencapsulation, core is in the form of

a. suspension
b. solid
c. emulsion
d. liquid

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

a. lubricant
b. osmotically active salt
c. disintegrant
d. low density polymer

25. Topical drug delivery systems are used for treating

a. local infections
b. diabetes
c. hypertension
d. hypotension

26. Ocular inserts have following feature:

a. blurred vision
b. low bioavailability
c. sticking of eyelids
d. Increased retention

27. The acceptable limits of osmolarity with respect to tonicity for parenteral solutions are

a. 250- 269 mosm/L
b. 278 – 328 mosm/L
c. 329-350 mosm/L
d. 240 -260 mosm/L

28. Trehalose, mannitol, dextrans are examples of ---------- used in parenterals

a. Preservatives
b. Buffers
c. Cryoprotectants
d. Vehicles

29. Infusions, irrigating solutions, dialyzing fluids are examples of
    a. Small volume parenterals
    b. Lyophilized parenterals
    c. Parenterals for intravenous administration
    d. Large volume parenterals

30. The sequential steps involved in freeze drying of parenterals are
    a. Freezing, Vacuum Drying, Sublimation
    b. Vacuum Drying, Freezing, Sublimation
    c. Freezing, Sublimation, Vacuum Drying
    d. Sublimation, Vacuum Drying , Freezing

31. The recommended particle size of dispersed active pharmaceutical ingredient in ophthalmic suspension is
    a. More than 10 microns
    b. Not more than 10 microns
    c. Not more than 5 microns
    d. Not more than 20 microns

32. 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

33. The recommended limits for number of subvisible particles in ophthalmic solutions by light obscuration test as per USP are:
    a. Particles of size $\geq$ 10 microns : 50 per ml and $\geq$ 25 microns : 5 per mL
    b. Particles of size $\geq$ 20 microns : 50 per ml and $\geq$ 50 microns : 5 per mL
    c. Particles of size $\geq$ 50 microns : 50 per ml and $\geq$ 100 microns : 5 per mL
    d. Particles of size $\geq$ 20 microns : 50 per ml and $\geq$ 100 microns : 5 per mL

34. ---------- 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

35. 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

36. 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

37. The process variables that affects quality of microencapsulated product prepared by Wurster technique are
    a. Density
    b. Particle size
    c. Velocity of atomization air
    d. Density, particle size, velocity of atomization air, inlet and outlet temperature

38. Spermaceti and Glyceryl stearate are examples of ---------- used as coating materials in microencapsulation are
    a. Water soluble resins
    b. Water insoluble resins
    c. Waxes
    d. Gums

39. ---------- is used as Opthalmic diagnostic agent.
    a. Fluorescine Sodium
    b. Methyl Paraben
    c. Benalkonium Chloride
    d. Murexide

40. Freezing point depression is the function of
    a. No. of particles in the solution
    b. Quantity of solution
    c. Emulsifying agent
    d. Colour

41. Suspension & oily injection can be administered through:
    a. intravenous
    b. intraarterial
    c. intramuscular
    d. intraspinal

42. In Rotating Basket Apparatus for dissolution studies, Basket of mesh size used ------
    a. 22 mesh
    b. 30 mesh
    c. 35 mesh
    d. 40 mesh

43. For preparations intended for parenteral administration USP 24 requires the use of ---- as pharmaceutical aid except.
    a. Water for injection
    b. Sterile water for injection
    c. Bacteriostatic water for injection
    d. Purified water

44. The DOP test is used for checking the efficiency of
    a. HEPA filter
    b. Membrane Filter
    c. Asbestos filter
    d. Water filter

45. Non ionic surfactant vesicles related to:
    a. Liposomes
    b. Niosomes
    c. Nanoparticles
    d. PEGylated Liposome

46. The solution instilled as eye drops into ocular cavity may disappear from the Precorneal area of the eye by which of the following routes:
    a. Nasolacrimal drainage
    b. Tear Turnover
    c. Corneal absorption
    d. Nasolacrimal drainage, tear turnover, corneal absorption &conjunctival uptake

47. Which layer is the major rate limiting barrier for permeation of hydrophilic drugs across the cornea?
    a. Endothelial barrier
    b. Stroma
    c. Epithelial barrier
    d. Endothelial barrier and Epithelial Barrier

48. One of the organisms given below is used as biological indicator in IP for ethylene oxide sterilization. Choose the correct one:
    a. Bacillus stearothermophillus
    b. Spores of Bacillus subtilis
    c. Spores of Bacillus cereus
    d. spores of Bacillus stearothermophillus

49. Lecithin is a type of surface-active agent;
    a. Anionic
    b. Cationic
    c. Nonionic
    d. Ampholytic

50. What percentage of boric acid seems to be isotonic with eyes
    a. 0.9
    b. 1.9
    c. 0.5
    d. 2.9

Answer Kay-

1 C	**11 B**	**21 C**	**31 B**	**41 C**
2 B	**12 A**	**22 C**	**32 B**	**42 D**
3 B	**13 B**	**23 B**	**33 A**	**43 D**
4 A	**14 A**	**24 B**	**34 A**	**44 A**
5 B	**15 A**	**25 A**	**35 B**	**45 B**
6 B	**16 A**	**26 D**	**36 D**	**46 D**
7 C	**17 B**	**27 B**	**37 D**	**47 D**
8 C	**18 C**	**28 C**	**38 C**	**48 B**
9 A	**19 A**	**29 D**	**39 A**	**49 D**
10 A	**20 A**	**30 A**	**40 A**	**50 B**