Final Year B. Pharm (Sem VIII) 2019-20 (CBCS pattern)

Pharmaceutics lab IV question bank

Sr. No.	QUESTION
1.	What is the difference between WFI (bulk) and Sterile Water for Injection?
2.	What are pyrogens?
3.	What are the methods employed for the removal of pyrogens?
4.	Give the significance of various tests for WFI prescribed in the IP monograph.
5.	What is an entrainment trap?
6.	Enlist the large-scale manufacturing methods for the preparation of WFI and give advantages of Vapor compression still.
7.	What is reverse osmosis and what is its relevance in the manufacturing of WFI?
8.	Comment on the storage and distribution of WFI.
9.	Explain the analytical principle involved in the following monographic test for WFI as per IP. i) Calcium and magnesium ii) Heavy metals.
10.	Give the principle of the LAL test.
11.	Give the classification of glass as per hydrolytic resistance.
12.	Give the significance of Test 1 in the context of the hydrolytic resistance test as per IP.
13.	What is Type II glass give the significance of its preparation process?
14.	What is Type I glass? Give its advantages and limitations.
15.	Name the indicator used in the hydrolytic resistance test for IP.
16.	What is the principle of hydrolytic resistance test IP?
17.	What is the solution A used in the test for rubber closures as per IP?
18.	Enlist the test for rubber closures as per IP.
19.	Give the significance of the self-sealability test for rubber closures as per IP.
20.	What is the significance of the sterilization test for rubber closures as per IP?
21.	Enlist the methods of sterilization and give the principle of Dry Heat Sterilization.
22.	Give the principle of the leaker test for ampoules.
23.	Explain in brief the processing of containers for injection.
24.	What is the significance of pH adjustment in the preparation of NaCl and Dextrose injection?
25.	What is a millimole and give its significance in parenteral preparations?
26.	Give formulation considerations for NaCl and Dextrose injection.
27.	Give formulation considerations for Ascorbic acid injection.
28.	Comment on the stability of Ascorbic acid injection.
29.	What is an overage and give its significance?
30.	Give the significance of the container used for ascorbic acid injection.
31.	Give formulation considerations for Calcium Gluconate Injection IP
32.	How much percentage of the drug can be replaced by calcium stabilizer in injection IP?
33.	Give precautions to be taken while preparing Calcium gluconate injection IP in the laboratory.
34.	Why is hot water used during the processing of Calcium gluconate injection IP?
35.	What is the prescribed millimoles/ml of Calcium gluconate injection and give its significance?
36.	What are the sources of pyrogens in pharmaceutical products?
37.	Explain the analytical principle involved in the following monographic test for WFI as per IP. i) Chlorides and ii) Sulphates
38.	Enlist the large-scale manufacturing methods for the preparation of WFI and give advantages of Multiple-effect stills.
39.	Give the principle of the rabbit pyrogen test.
40.	Give the significance of Test 2 in the context of the hydrolytic resistance test as per IP.
41.	Give the significance of the fragmentation test for rubber closures as per IP.

42.	Enlist the methods of sterilization and give the principle of Moist Heat Sterilization.
43.	Give the role of sodium bicarbonate in Ascorbic acid injection IP.
44.	Give the role of calcium-d-saccharate in Calcium gluconate injection IP.
45.	Enlist the methods of sterilization and give the principle of Sterilization by filtration.
46.	Give the role of chlorocresol in Ascorbic acid injection IP.
47.	Explain the concept of the Class 100 area.
48.	Enlist the methods of sterilization and give the principle of Heating with a bactericide.
49.	What are the prescribed millimoles of sodium and chloride ions in NaCl and Dextrose injection and give its significance?
50.	Give the role of disodium EDTA in Ascorbic acid injection IP.
51.	Enlist the advantages and disadvantages of SRDDS
52.	Draw the % CR versus time curve for SRDDS and CRDDS
53.	Differentiate between sustained release and controlled release systems
54.	What is the significance of loading and maintenance dose?
55.	What is the formula for loading and maintenance dose?
56.	A short problem on loading and maintenance dose
57.	Give formulation strategies in which loading and maintenance dose can be given in the same dosage form
58.	Explain the melt granulation technique
59.	What is the significance of dissolution testing?
60.	Enlist the dissolution apparatus as per IP
61.	Enlist the dissolution apparatus as per USP
62.	We'll give you examples of dosage forms or drugs and you'll have to recommend a dissolution apparatus
63.	Explain the working of paddle apparatus
64.	What points have to be considered during aliquot withdrawal?
65.	What is the sink condition? How would you maintain it in vitro?
66.	What is the dissolution medium for carbamazepine tablets? Why did you select it?
67.	SLS is not found in the body, then how can it be used as the dissolution medium? (What is its equivalent found in vivo?)
68.	What dissolution medium would you select for the testing of: 1) A freely water-soluble drug 2) A floating tablet 3) An enteric-coated tablet
69.	Give the diagrammatic representation of one compartment open model – IV administration
70.	What graph can be plotted to analyse pharmacokinetic data obtained from blood samples of a product showing a one-compartment open model on IV administration and what information can be gleaned from which part?
71.	Formula and problems on the calculation of half-life or elimination rate constant
72.	Formula and problems to calculate the volume of distribution. Comment on the value obtained.
73.	Formula and problems on the amount or concentration of drug remaining after a fixed time
74.	Formula and problems on total clearance
75.	Formula and problems on the area under the curve
76.	Enlist applications of microencapsulation with examples
77.	Reason to microencapsulate paracetamol
78.	Which is the main category of ingredients required to carry out microencapsulation? What is the basis for the selection of LMVP?
79.	Why is sodium sulphate used as the salt and not sodium chloride while microencapsulating paracetamol?
80.	Enlist the methods that can be used for microencapsulation

81.	Classify the various approaches for phase separation-coacervation
82.	Explain the basic principle behind phase separation-coacervation method (3 steps)
83.	Explain the mechanism of salt addition method of microencapsulation
84.	What steps are observed microscopically while performing phase separation-coacervation as per salt addition technique?
85.	What is rigidiation? How do you achieve rigidisation in the experiment that you have carried out?
86.	What is an SOP?
87.	Enlist any 4 qualities of a good SOP
88.	Questions on SOP of dissolution test apparatus
89.	What does GRAS certification signify?
90.	What tests are performed to characterize excipients and drugs?
91.	Name any 2 examples of common categories of excipients such as diluents, disintegrants, superdisintegrants, lubricants, glidants, suspending agents, emulsifying agents, gelling agents, ointment bases, hydrophilic polymers, hydrophobic polymers, pH-responsive polymers, etc.
92.	Name any 2 mucoadhesive polymers and plasticizers
93.	Calculate the amount of drug per film when the diameter/ radius of mould, amount of drug added for the whole mould and the desired size of the film is given.
94.	Enlist evaluation tests to be performed on mucoadhesive films
95.	Give the direction of the use of mucoadhesive films
96.	Enlist the advantages of a buccal mucoadhesive film
97.	Name any 2 types of diffusion cells that can be used to determine drug permeation via skin or mucosa
98.	What is the significance of the addition of a plasticizer during the formation of a film?
99.	Classify mucoadhesive polymers with examples
100.	Which type of drugs would benefit from being formulated as a buccal mucoadhesive film? Give examples