SNS COLLEGE OF PHARMACY AND HEALTH SCIENCES

COIMBATORE

Unit 4 Question Bank

Subject Name: Industrial Pharmacy I

Staff Name: Ms.P.Rasika

2 Marks

Q. No	Question	Bloom Level	Exam/Company Reference
1	Define parenteral products.	L1	GPAT, Dr. Reddy
2	List any four types of parenteral products.	L1	Zydus, Cipla
3	State two advantages of parenteral route over oral route.	L2	Pfizer, GPAT
4	What is isotonicity? Give one example of isotonic solution.	L2	Sun Pharma, GPAT
5	Name two common vehicles used in parenteral formulations.	L1	Cipla, RRB
6	List any two essential preformulation factors for parenterals.	L1	GPAT, Pfizer
7	Write two differences between aseptic processing and terminal sterilization.	L2	Dr. Reddy, Zydus
8	Mention two examples of large volume parenterals.	L1	Sun Pharma, RRB
9	What is lyophilization?	L1	GPAT, Cipla
10	Name two types of closures used for vials.	L1	Pfizer, Zydus

5 Marks

Q. No	Question	Bloom Level	Exam/Company Reference
1	Explain how you would select a suitable vehicle for an intramuscular injection of a poorly soluble drug.	L3	Cipla, GPAT
2	Prepare a flowchart showing steps in aseptic processing for sterile powders.	L3	Sun Pharma, RRB
3	Demonstrate with an example how to adjust tonicity of a parenteral product using sodium chloride equivalent method.	L3	Pfizer, GPAT
4	Apply preformulation factors to design a stable parenteral formulation for a heat-sensitive drug.	L3	Dr. Reddy, Cipla
5	Show how to select an appropriate container and closure for a 500 mL infusion fluid.	L3	Zydus, GPAT
6	Using a case study, decide which additives would improve stability of an oxidizable drug in injection form.	L3	Sun Pharma, Cipla
7	Illustrate the filling and sealing procedure for ampoules in a small-scale production setup.	L3	RRB, Pfizer
8	Develop a simple protocol for quality control testing of large volume parenterals in a hospital pharmacy.	L3	GPAT, Dr. Reddy
9	Explain with an example how lyophilization improves stability of parenteral products.	L3	Zydus, Sun Pharma
10	Formulate a parenteral nutrition solution ensuring isotonicity and sterility (outline steps).	L3	Cipla, GPAT

10 Marks

Q. No	Question	Bloom Level	Exam/Company Reference
1	Analyse the advantages and limitations of different types of parenteral products and suggest when each type is preferable.	L4	GPAT, Dr. Reddy
2	Critically evaluate preformulation factors influencing choice of vehicles,	L4	Pfizer, Cipla

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	buffers, and additives for an anti-cancer injection.		
3	Compare and contrast aseptic processing with terminal sterilization for large-scale production in a company like Cipla or Pfizer. Highlight regulatory expectations.	L4	Cipla, Pfizer
4	Analyse a failed batch of lyophilized product: identify possible causes (formulation vs process) and recommend corrective actions.	L4	Sun Pharma, GPAT
5	Assess the impact of container–closure interaction on stability and sterility of infusion fluids produced in Sun Pharma.	L4	Sun Pharma, Dr. Reddy
6	Evaluate the importance of isotonicity in parenteral products by analysing the consequences of hypotonic or hypertonic injections.	L4	Zydus, GPAT
7	Discuss quality control tests of parenterals and analyse how failure in any test may affect patient safety.	L4	RRB, Cipla
8	Compare formulation strategies for sterile powders vs large volume parenterals used in hospitals.	L4	Pfizer, Dr. Reddy
9	Analyse regulatory and practical challenges in selecting containers and closures for multi-dose vials.	L4	Zydus, Sun Pharma
10	Critically examine the production facilities and controls required for aseptic processing of parenterals in a pharmaceutical company.	L4	GPAT, Cipla