

UNIT-I PREFORMULATION

10 marks:

- Q. 1 Explain preformulation studies involved in development of tablet dosage forms
- Q. 2 Explain importance of solubility, dissociation constant and partition co-efficient of drug in development of solid dosage forms.

5 Marks:

- Q. 1 Describe the importance of partition co-efficient in the drug design with suitable examples.
- Q. 2 Define the term preformulation and explain the parameters to be considered in preformulation studies.
- Q. 3 Enlist the methods of enhancing the solubility of drugs

2 Marks:

- Q. 1 What is intrinsic solubility of drugs? Give its significance
- Q. 2 What are hydrates and solvates give examples?
- Q. 3 Define true and pseudo polymorphs
- Q. 4 What are disintegrants and give two examples.
- Q. 5 List the advantages and disadvantages of amorphous solid forms.

UNIT-II TABLETS & LIQUID ORALS

- Q. 1 With a neat labelled diagram, explain rotary compression process of tablet manufacturing.
- Q. 2 Discuss the defects in film coating process.
- Q. 3 Define tablet coating, write the types of coating and explain the film coating composition.
- Q. 4 Discuss the tablet compression cycle by multistation rotary press.
- Q. 5 Write the reasons and remedies for capping and lamination.
- Q. 3 Discuss dry granulation technique and list out advantages and disadvantages
- Q. 4 Classify granulation techniques. Discuss the wet granulation method along with equipments used in the each step.
- Q. 5 Give a detailed account of the different excipients and their functions used in the tablets

5 marks:

- Q. 1 Describe quality control tests for tablets.
- Q. 4 Describe formulation of chewable and sublingual tablets
- Q. 5 Discuss the steps involved in sugar coating with suitable examples of ingredients used in each step
- Q. 6 Discuss diluents and disintegrants used in tablet preparation
- Q. 7 Emphasize on different stages involved in sugar coating of a compressed tablets.

2 marks

- Q. 1 Differentiate disintegrants and super disintegrants with examples.
- Q. 2 Significance of bland excipient in buccal tablets

- Q. 3 Differentiate diluents and directly compressible vehicles by giving examples.
- Q. 6 What are chewable tablets? Give its advantages
- Q. 7 What are enteric coating polymers? Name any two examples
- Q. 8 What tablet troches and lozenges
- Q. 9 List out the lubricants used in tablets
- Q. 10 List the quality control tests for tablet
- Q. 11 Write a note on chewable tablets
- Q. 12 List out the manufacturing defects of tablets.

LIQUID ORALS

5 marks:

- Q. 1 Give a note on stabilization of liquid orals
- Q. 2 List out approved colourants and flavourants in liquid orals. Differentiate dyes from lakes.
- Q. 3 How do you solve solubility and stability problems in the development of liquid orals.
- Q. 4 Discuss the formulation of reconstitutable suspension with a suitable formula.
- Q. 5 Explain filling and packing of liquid orals.
- Q. 6 Classify liquid oral. What are its ideal characteristics?
- Q. 7 Explain the challenges faced in the development of oral suspension
- Q. 8 Enumerate the manufacturing considerations for liquid orals
- Q. 9 Describe the methods of filling liquid oral dosage forms
- Q. 10 Explain in detail formulation of liquid oral dosage forms

2 marks

- Q. 1 Merits and demerits of volumetric filling.
- Q. 2 Name the filling techniques of liquid orals.
- Q. 3 Significance of viscosity in liquid orals.
- Q. 4 Organoleptic additives of liquid orals.
- Q. 5 Name the type of ingredients used in oral suspensions.
- Q. 6 What do you mean by gravimetric and volumetric filling of liquid orals
- Q. 7 Name any two approved flavors and colorants in liquid orals.
- Q. 8 Write the merits of constant level filling technique of liquid orals
- Q. 9 Importance of overages in vitamin formulation

UNIT-III CAPSULES

5 marks:

- Q. 1 Explain the steps involved in manufacturing of hard gelatin capsules shells
- Q. 2 Discuss any two quality control tests for capsules
- Q. 3 Explain nature of soft gelatin capsule content.
- Q. 4 Explain the steps involved in manufacturing of hard gelatin capsules shells
- Q. 5 Discuss the production of empty hard gelatin capsules
- Q. 6 Explain the rotary die process for manufacturing of soft gelatin capsules
- Q. 7 Explain the filling process of hard gelatin capsules
- Q. 8 Explain the quality control tests of capsules

2 Marks

- Q. 1 Storage conditions for capsules.
- Q. 2 Types of gelatin in capsules.
- Q. 3 Name plasticizers used in capsules.
- Q. 4 Measurement of bloom strength of gelatin.
- Q. 5 Define minimum per gram factors by giving formula
- Q. 6 Give the methods for polishing of hard gelatin capsules
- Q. 7 Define bloom strength.
- Q. 8 Write on different sizes of hard gelatin capsules
- Q. 9 Write on nature of soft gelatin capsule shell.

UNIT-IV PARENTERAL PRODUCTS

10 marks:

- Q. 1 Describe quality control tests for the parenterals dosage forms.
- Q. 2 Discuss in detail the production facilities for parenterals
- Q. 3 Write the elaborate discussion on primary packaging materials of parenteral dosage forms.

5 marks:

- Q. 1 Write a note on environmental control during the manufacture of parenteral products
- Q. 2 What are the sources of contamination in parenteral production and write methods to overcome
- Q. 3 Write the specifications and methods of preparation of WFI.
- Q. 4 Discuss in detail the formulation of parenterals
- Q. 5 Discuss maintenance of environment in parenteral production in detail along with cleaning and sterilization techniques.
- Q. 6 Discuss the merits and demerits of glass as a packaging material for parenterals
- Q. 7 Write a note on formulations of small volume parenterals.

2 marks

- Q. 1 List out non-aqueous vehicles used in parenterals.
- Q. 2 Define pyrogens
- Q. 3 What are depot injections?
- Q. 4 Leakage test for parenterals.
- Q. 5 Requirements of oily vehicles in parenterals.
- Q. 6 Advantage of pull sealing over tip sealing of ampoules.
- Q. 7 Write a short note on sterile powders for injection.
- Q. 8 Write different methods of sealing of ampoules.
- Q. 9 What do you mean by 'class 100' clean area
- Q. 10 Give two examples of antioxidants used in parenterals
- Q. 11 Write in vitro method for testing of pyrogens
- Q. 12 Name the methods of adjustment of isotonicity
- Q. 13 Significance of isotonicity and name the methods of adjustment.
- Q. 14 What is LAL test?
- Q. 15 Significance of isotonicity in parenterals.

OPHTHALMIC FORMULATIONS

5 marks:

- Q. 1 Write a note on containers for ophthalmic preparations
- Q. 2 Discuss the formulation of an eye ointment.
- Q. 3 Write a note on evaluation of an eye ointment.
- Q. 4 Write a note on evaluation of eye drops.
- Q. 5 Describe formulation of ophthalmic gels.
- Q. 6 Describe formulation of ophthalmic suspensions.
- Q. 7 Explain the formulation of eye drops
- Q. 8 Explain the manufacturing of ophthalmic ointment
- Q. 9 Explain the requirements for the ophthalmic preparations

2 marks

- Q. 1 Write the ideal requirements of ophthalmic suspension
- Q. 2 Advantages of ophthalmics
- Q. 3 Role of viscosity modifiers in ophthalmics
- Q. 4 Importance of sterilization for ophthalmic dosage forms.
- Q. 5 Stabilizing agents used in eye drops
- Q. 6 Name the any four preservatives used in ophthalmics.
- Q. 7 Name any four preservatives used in ophthalmic preparations
- Q. 8 Name sterilization methods for eye ointment

UNIT-V COSMETICS & PHARMACEUTICAL AEROSOLS

10 marks:

- Q. 1 Define pharmaceutical aerosols with their merits and demerits. Add a note on foam type aerosols. (6+4)

5 marks:

- Q. 2 Write an elaborate note on three phase systems of aerosols with examples.
- Q. 3 Discuss components of aerosols formulation.
- Q. 4 Write a detailed note on propellants
- Q. 5 Describe the stability testing methods for pharmaceutical aerosols
- Q. 6 Explain in details containers used for aerosols
- Q. 7 Discuss and differentiate the pressure filling and cold filling of aerosols
- Q. 8 Discuss in brief the formulation of aerosols.
- Q. 9 Explain two filling methods in manufacturing of pharmaceutical aerosols

2 marks:

- Q. 1 Test for combustibility of aerosols.
- Q. 2 Write a note on quick breaking foam aerosols.
- Q. 3 Types of actuators used in aerosols.
- Q. 4 Write particle size analysis in aerosols
- Q. 5 What are two phase systems of aerosols
- Q. 6 Types of actuators in aerosols
- Q. 7 Write the advantages of metered dose inhalers.
- Q. 8 List evaluation test for aerosols
- Q. 9 Discuss the formulation of toothpaste
- Q. 10 Classify the propellants with suitable examples
- Q. 11 Write the valve system of aerosol

- Q. 12 What are metered dose inhalers
Q. 13 List out different containers used in aerosol formulations

COSMETICS

5 Marks

- Q. 1 Write the formulation and preparation clear liquid shampoo.
Q. 2 Name formulation ingredients in vanishing cream.
Q. 3 Define cream write the formulation of foundation cream.
Q. 4 Formulation and preparation of moisturizing cream
Q. 5 Write the principle involved in the formation of creams. Discuss various alkalies used in cream formulation
Q. 6 Classify face and talcum powders. Give method of preparation of compact powders.
Q. 7 What are solid components used in lipsticks preparation, write any one method of preparation of lipsticks.
Q. 8 What are the factors to be considered for formulation of eye lotion
Q. 9 Emphasize on formulation of lipstick.
Q. 10 Write a note on nail lacquers

2 marks:

- Q. 1 Film forming agents in nail lacquers.
Q. 2 Anti-caring agents in dentifrices.
Q. 3 Write a formula to prepare tooth paste.
Q. 4 Ideal properties of shampoos
Q. 5 What are conditioning agents used in shampoos give two examples.
Q. 6 Explain the procedure to prepare hair dye with suitable formula
Q. 7 What are abrasives? Give two examples.
Q. 8 Write the formulation of face powder
Q. 9 write a formula of cold cream
Q. 10 Write a formula for sunscreen lotion