

## **RAJIV GANDHI UNIVERSITY OF HEALTH SCIENCES**

### **QUESTION PAPER BANK**

#### **Chapter - 1 HISTORICAL BACKGROUND AND DEVELOPMENT OF PROFESSION OF PHARMACY (2)**

##### **SHORT ANSWERS (2 Marks)**

1. What is Pharmacopoeia? Mention all the editions of Indian Pharmacopoeia.
2. Give the significance of Pharmacopoeias.
3. Enlist various Pharmacopoeias.
4. List the editions of Indian Pharmacopoeia chronologically.
5. Mention the contents of National Formulary of India.
6. Differentiate between Indian Pharmacopoeia and National Formulary of India.
7. What is the latest edition and year of publication of Indian Pharmacopoeia?
8. Write the difference between Pharmacopoeia and Formulary.
9. Write any four salient features of first edition of Indian Pharmacopoeia.
10. Write any four salient features of second edition of Indian Pharmacopoeia.
11. Write any four salient features of third edition of Indian Pharmacopoeia.
12. Write any four salient features of fourth edition of Indian Pharmacopoeia.

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**Chapter - 2 WEIGHTS AND MEASURES: (2)****SHORT ANSWERS (2 Marks)**

1. Give the metric equivalents for the following: (a) one grain, (b) one ounce, (c) one teaspoonful, (d) one tablespoonful.
2. Give the metric equivalents for the following: (a) one minim, (b) one fluid ounce, (c) one tumblerful, (d) one quart.
3. Give the metric equivalents for the following: (a) one cup, (b) one pound, (c) one drop, (d) one wine glassful.
4. How many grams of a drug is required to make 120 ml of a 25%w/v solution?
5. What is percentage strength (%w/v) of a solution containing 450 mg of a medicament dissolved in 90 ml of a solvent?
6. How much of potassium permanganate would be required to prepare 50 ml of potassium permanganate solution of 2.8% w/v strength?
7. In what ratio 90 % alcohol and 30% be mixed to give 60% alcohol?
8. How many grams of dextrose is required to prepare 900 ml of 10% w/v solution?
9. How many parts of 15%, 10% and 5% alcohols are mixed to prepare 8% alcohol?
10. How do you prepare 1 litre of 5% w/v dextrose solution from 50% w/v dextrose solution?
11. How do you prepare 500 ml of 50% alcohol from 90% alcohol?
12. How do you prepare of 50% alcohol from 80% alcohol and 30% alcohol?
13. In what proportions should 25% w/v and 5% w/v dextrose solutions be mixed to produce a 10 %w/v dextrose solution?
14. How many grams of cream base should be mixed with 10 gm of 4% w/w and 25 gm of 8% w/w cream to make 5% w/w cream?
15. How many litres of 8% solution can be prepared from 500gm of a solid?
16. What are isotonic solutions?
17. Define isotonic and paratonic solutions.
18. Define 'allegation' and 'proof spirit'.
19. What is proof strength of 45% v/v alcohol?
20. Find the strength of 90% v/v alcohol in terms of proof spirit.
21. Convert 90% v/v and 40% v/v alcohol in to proof strength.
22. Convert 40% v/v alcohol in to proof spirit.
23. How do you prepare 50 litres of proof spirit from 90% v/v alcohol?
24. What is the proof spirit of an elixir containing 42% alcohol?
25. What is the proof spirit of a 1% v/v alcohol?
26. Define the terms 'proof spirit' and 'isotonicity'.
27. Calculate the actual strength of 25° O.P.(over proof).
28. Calculate the actual strength of 45° U.P.(under proof).

29. What are hypertonic and hypotonic solutions?
30. Calculate the percentage of sodium chloride required to render a procaine HCl iso-osmotic with blood plasma. (1% w/v solution of procaine HCl has a freezing- point of  $0.122^{\circ}\text{C}$  and 1% w/v sodium chloride has a freezing- point of  $0.576^{\circ}\text{C}$ )
31. Calculate the percentage of sodium chloride required to render a solution of 0.5 percent boric acid isotonic with blood plasma. ( $E_{\text{NaCl}}$  of 0.5 percent boric acid solution is 0.3).

**A) PRESCRIPTION, B) POSOLOGY, C) INCOMPATIBILITY (10)**

**LONG ESSAYS (10 Marks)**

1. Define prescription. With the help of an ideal example describe the importance of all the parts of a prescription.
2. Define prescription. Explain the handling of prescription. Write about the sources of errors in prescription.
3. Explain the factors affecting dose selection. Give any two formulae to calculate children dose.
4. Define posology. Enumerate different factors affecting selection of dose of a drug.
5. Define and classify incompatibility. Explain the therapeutic incompatibility with examples.

**Chapter - 3 INTRODUCTION TO DOSAGE FORMS (5 + 2)****SHORT ESSAYS (5 Marks)**

1. Classify monophasic liquid dosage forms with examples.
2. Write the principle and procedure involved in the preparation of syrup I.P.
3. Define preservatives. Classify with examples.
4. Define stabilizers. Explain with examples.
5. Differentiate between elixirs and syrups.
6. Explain the organoleptic additives used in monophasic liquid dosage forms with examples.
7. Explain in detail the different vehicles used in monophasic dosage forms. Give their advantages and disadvantages.
8. Define dosage form and classify with examples.

**SHORT ANSWERS (2 Marks)**

1. Define monophasic liquid dosage forms with examples.
2. Name any four monophasic dosage forms used externally.
3. Name any four monophasic dosage forms used internally.
4. Name any four solvents used in the preparation of monophasic liquid dosage forms.
5. Name any two antioxidants used in liquid formulations.
6. Define gargle with examples.
7. Define mouthwashes with examples.
8. Write the advantages of syrups.
9. What is invert sugar?
10. Define linctus with examples.
11. Define expectorant with examples.
12. Define throat paint with examples.
13. Define elixirs with examples.
14. Define enema with examples.
15. Write any two examples for colouring agents and flavouring agents used in monophasic dosage forms.
16. Name any two examples of stabilizers used in monophasic liquid dosage forms.
17. Name any two antioxidants and preservatives used in monophasic liquid dosage forms.
18. Define antioxidants with examples.
19. Define preservatives with examples.
20. Define stabilizers with examples.

**Chapter -4 EMULSIONS AND SUSPENSIONS (10 + 2)****LONG ESSAY (10 marks)**

1. Define and classify suspension. Write the advantages and disadvantages of suspension?
2. Define suspension. Explain the preparation of suspension containing diffusible and indiffusible solids?
3. Define and classify suspension. Differentiate flocculated and deflocculated suspension?
4. Define suspension. Explain controlled flocculation?
5. Name the various theories of emulsification and explain any two?
6. Define emulsion. Explain the various methods of preparation of emulsion?
7. What are the various instability of emulsion? Discuss them with their cause and precautions to avoid them?
8. Define and classify emulsion. Write the various identification tests for emulsion type?

**SHORT ANSWERS (2 Marks)**

1. What are structured vehicle? Give examples.
2. Name any two suspending and emulsifying agents.
3. Name any four flocculating agents used in preparation of suspension.
4. Name any two flocculating and deflocculating agents.
5. What is phase volume ratio? How it is useful in preparation of emulsions.
6. What is phase inversion? How it can be prevented.
7. Classify emulsifying agents.
8. Write the primary emulsion formula for fixed oils and mineral oils.
9. Write the primary emulsion formula for fixed oils and volatile oils.
10. Write the primary emulsion formula for oleoresins and volatile oils.
11. Classify emulsions.
12. Classify suspensions.
13. Why emulsifying agent is required in the preparation of emulsions.
14. Define creaming and cracking?
15. Give Griffin's HLB value scale and its application.
16. Name the various theories of emulsification.
17. What should be the HLB of emulsifying agent to give oil in water or water in oil emulsions?
18. Give two examples for wetting agents.
19. Define wetting phenomenon.
20. Define surfactants with examples.
21. Enlist various identification tests for emulsion.

## **Chapter -5 POWDERS (5 + 2)**

### **SHORT ESSAY (5 Marks)**

1. Define powders. Classify powders.
2. Explain geometric dilution with an example.
3. Discuss the different methods of mixing of powders.
4. Explain simple and compound powders with an example.
5. How do you prepare effervescent granules by heat method?
6. How do you dispense eutectic powders?
7. Explain insufflations with examples.
8. Write the advantages and disadvantages of powders as dosage form.
9. Define and classify powders based on official grades of powders.
10. Explain dusting powders with examples

### **SHORT ANSWERS (2 Marks)**

1. Define hygroscopic and deliquescent powders.
2. How do you dispense potent powders?
3. Why is double wrapping of powder required?
4. Classify powders.
5. Define cachets with example.
6. Define powder with an example.
7. Define and classify dusting powders.
8. Define eutectic powders.
9. Define insufflations with examples.
10. Define simple and compound powders.
11. What are the ingredients of dusting powders?
12. Define geometric dilution.
13. Enlist the methods of mixing of powders.

**Chapter - 6: SEMISOLID DOSAGE FORMS: (5+5+2 Marks)****SHORT ESSAY (5 marks)**

1. Define ointment. Explain any two methods used for the preparation of ointment.
2. Define ointment. Describe different bases used for preparation of ointment.
3. Explain the various evaluation tests for ointment.
4. Define paste. Explain the formulation of paste.
5. Define suppositories. Explain the various suppository bases.
6. Define suppositories. Describe the various methods used for the preparations of suppositories
7. Explain the various evaluation tests for suppositories.
8. Define and classify ointments. Differentiate ointment and paste.
9. Write the differences between ointment and cream.
10. Define gels. Classify gelling agents with examples.

**SHORT ANSWERS (2 Marks)**

1. Name the types of ointment bases.
2. Define paste? Name the bases used for the preparation of paste.
3. Define and classify suppositories.
4. Give any four examples of emulsifying bases.
5. Mention the disadvantages of oleogenous bases.
6. Define displacement value.
7. What do you mean by pessaries?
8. Name two lubricants used for lubrication of suppository moulds.
9. Why cocoa butter is not used in the preparation of pessaries?
10. Name the different shapes of suppositories.
11. Name any four demerits of suppositories.
12. Name the various methods for the evaluation of ointments.
13. Define ointment and cream.
14. Define pastes and gels.
15. Name the different types of creams.
16. Name any four examples of gelling agents.
17. Name any two differences between ointment and paste.
18. Name any two differences between ointment and creams.
19. Name the different methods used for the preparation of suppositories.
20. Differentiate between suppositories and pessaries.
21. Write the four qualities of an ideal suppository base.
22. What is meant by Witepsol?
23. What is meant by Massa Estarinum?
24. What is meant by Massapol?

**Chapter - 7: GALENICALS: (5+2 marks)****LONG ESSAY (5 Marks)**

1. Explain the menstrums used in the extraction processes.
2. Describe the simple percolation process with a neat diagram.
3. Write the process of maceration for organized and unorganized drugs.
4. Differentiate between simple and modified maceration.
5. Differentiate between infusion and decoction.
6. Write a note on modified percolation process.
7. What is multiple maceration? Write its merits and demerits.
8. Differentiate double and triple macerations with examples.
9. With a neat labeled diagram explain soxhlet extraction process.
10. What is continuous hot percolation process? Write its advantages and disadvantages.

**SHORT ANSWER (2 Marks)**

1. Define extraction.
2. Define galenicals with example.
3. Define menstruum and give two examples.
4. Define marc and expressed liquid.
5. Enlist the different extraction processes.
6. Write the difference between cold and concentrated infusion.
7. Name the different types of maceration process.
8. Define the terms percolation and soxhlation.
9. Why is imbibition done before packing of the drug into the percolator?
10. Write the two limitations of continuous hot percolation process.
11. Name the different solvents used as menstruum.
12. Define infusion and decoction.
13. Write the two differences between simple and modified maceration.
14. Name the preparation obtained from infusion process.
15. What do you mean by repercolation?
16. What do you mean by reserved percolation?
17. Name the steps involved in the process of percolation.
18. Write the equation for calculating the volume for first part of menstruum in double and triple maceration.
19. Define maceration and percolation.
20. Name the methods of modified percolation.
21. Give the examples of tincture prepared by maceration process.
22. Why marc is not pressed for unorganised drugs?
23. Name the tinctures obtained from organized drugs.



24. Name the tinctures obtained from unorganized drugs.
25. What are the advantages and disadvantages of alcohol as menstruum?
26. What are the advantages and disadvantages of water as menstruum?
27. Define reserved percolation.

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**Chapter - 8: SURGICAL AIDS (5 + 2)****SHORT ESSAY (5 Marks)**

1. Define and classify various surgical sutures and ligatures
2. What are surgical sutures and ligatures? Give their ideal characteristics.
3. Explain the different steps involved in the manufacturing of surgical catgut.
4. Explain the different methods of sterilization of surgical catgut.
5. Explain the standardization of surgical catgut.
6. What is absorbent cotton? Write its advantages and disadvantages.
7. What are bandages? Explain crepe bandage and calico bandage.
8. What are bandages? Explain dommete bandage and triangular bandage.

**SHORT ANSWERS (2 Marks)**

1. Define sutures and ligatures.
2. Give the ideal properties of absorbent cotton.
3. What are medicated bandages? Give one example.
4. Give the applications of absorbent cotton.
5. Give the storage conditions of absorbent cotton
6. List the ideal properties of surgical dressings
7. Differentiate between boilable and non-boilable surgical catgut
8. Give the labelling requirements of surgical catguts.
9. What is POP? Give its applications
10. What is fascia lata?
11. Enlist the methods of sterilization of surgical catgut.
12. Give any two differences between absorbable and non-absorbable sutures and ligatures.

## Chapter - 9: RADIOPHARMACEUTICALS (2)

### SHORT ANSWERS (2 Marks)

1. Define radioisotopes. Give two examples.
2. Write any four diagnostic applications of radiopharmaceuticals.
3. Write any four therapeutic applications of radiopharmaceuticals.
4. Write any four safety precautions in handling radiopharmaceuticals.
5. Write any two examples for radiopharmaceuticals.
6. Name any two radiopharmaceuticals with their applications.
7. Define effective half-life of radiopharmaceuticals.
8. Define radioactivity. Write its unit.
9. Write the labelling requirements of radiopharmaceuticals.
10. Write any two differences between conventional pharmaceuticals and radiopharmaceuticals.

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