

(3 Hours)

Marks : 70

Please check whether you have got the right question paper.

**N.B:** 1. All questions are **compulsory**.

2. **Figures** to the **right** indicate **full marks**

3. **Draw neat labelled diagrams wherever necessary.**

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|---|---|
| 1. (a) Give scope of Pharmaceutics.   | 2 |
| (b) Define Drug release & Absorption.   | 2 |
| (c) Calculate the quantity of sodium chloride required to prepare 1000 ml of a 5% solution.   | 1 |
| (d) State Newton's Law of flow .  | 1 |
| (e) Explain any two methods for preparation of Aromatic water. Justify, 'concentrated Dill water is prepared by alternate solution method.' | 4 |
| <b>OR</b>   |   |
| (e) What is Syrup NF ? Explain any two methods to prepare syrup.  | 4 |
| (f) Write in brief about dry syrups.  | 2 |
| (g) Give classifications of complexation.   | 2 |
| (h) Define sink condition.  | 1 |
| 2. (a) Give physiological consideration for topical route of administration.  | 3 |
| (b) Comment on Homeopathic system of medicines.   | 2 |
| (c) Give the importance of partition coefficient in preformulation studies of monophasic liquid dosage form.                                | 2 |
| (d) Elaborate on different types of Containers.   | 3 |
| (e) Enlist methods used for analysis of complexes.  | 1 |
| 3. (a) Explain role of Quality Assurance in pharma manufacturing.   | 2 |
| (b) Write a note on Shear thinning system.  | 2 |
| (c) Discuss Liquid mixing by impeller.  | 2 |
| (d) Enlist methods to measure the particle size & explain any one method in detail.   | 4 |
| (e) State Fick's First law of diffusion.  | 1 |

4. (a) Define any three. Sprays, Throat paints, Liniments, Lozenges **3**
- (b) From the following formula calculate quantity of each ingredient required to make 1000 g of Powder.
- |               |        |          |
|---------------|--------|----------|
| i) Boric acid | 5.0 g  | <b>2</b> |
| ii) Starch    | 20.0 g |          |
| iii) Talc     | 50.0 g |          |
- (c) Give an account of organoleptic additives used in monophasic liquid dosage forms. **2**
- (d) Describe size separation by sedimentation method. **2**
- (e) State & explain Noyes- Whitney equation. **2**
5. (a) Give overview of status of pharmaceutical industry in India. **2**
- (b) Elaborate on any one method to determine non-Newtonian fluid. **2**
- (c) Discuss construction and working of Filter press. **3**
- (d) Explain in brief principle & working of Fluid energy mill **OR** Ball mill. **4**
6. (a) Write in brief about NFI. **3**
- (b) What is drug efficiency and dose response. **2**
- (c) Elaborate on various quality control tests performed on monophasic liquid dosage forms. **4**
- (d) Discuss packaging of ORS powders. **2**
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