

V SEMESTER
PHARMACEUTICS-II
(Pharmaceutical Technology-I)
PH. THEORY 3 hours/week

UNIT -I

Preformulation Studies : Principal areas like

- a. Bulk Characterization : Crystallinity and Polymorphism, Compressibility, hygroscopicity, bulk density, powder flow properties.
- b. Solubility analysis : pKa, pH solubility profile, Common ionic effect, thermal effects, solubilization, partition coefficient and dissolution.

UNIT -II

Liquid Dosage Forms: Introduction, types of additives used in formulations, Vehicles, stabilizers, preservatives, suspending agents, emulsifying agents, solubilizer, colors, flavours and others, manufacturing, packaging and evaluation of clear liquids, suspensions and emulsions.

UNIT -III

Semisolid Dosage Forms: Definitions, types, mechanisms of drug permeation, factors influencing permeation, semisolid bases and their selection. General formulation of semisolids: like ointments, creams, pastes & gels, their manufacturing procedure, evaluation and packaging. Suppositories: Ideal requirements, bases, manufacturing procedure, packaging and evaluation.

UNIT -IV

Tablets: Types of tablets, excipients used, and different granulation techniques used for preparation of tablets, types of tablet press, manufacturing defects and evaluation of tablets. Coating of tablets : Type of coating – Sugar coating, film coating, enteric coating, film defects, materials used and evaluation of coated tablets. Discussion on new materials such as superdisintegrants, equipments like rapid mixers, granulators, fluid bed dryer.

UNIT –V

Capsules: Advantages and disadvantages of capsule dosage forms, materials used for production of hard gelatin capsules, different sizes of capsules, methods of capsule filling, Soft gelatin capsules, capsule shell and content of capsules, importance of base absorption and minim/gm. Quality control and storage of capsule dosage forms.

RECOMMENDED BOOKS :

1. Bently's Textbook of pharmaceuticals edited by E.A. Rawlins (All India Traveller Book Seller, New Delhi)
2. The Theory and Practice of Industrial Pharmacy by Lachmann, Libermann and Kanig (Varghese Pub. House, Bombay)
3. Pharmaceutical Dosage Forms and Drug Delivery Systems by Ansel, Allen and Popovich (B. I. Waverly Pvt. Ltd., New Delhi)
4. REMINGTON: The Science and Practice of Pharmacy, 20th Edition (Lippincott Williams & Wilkins, Baltimore)
5. Pharmaceuticals: The Science of Dosage Form Design by Aulton (Churchill Livingstone, Edinburgh)