

VI SEMESTER
PHARMACEUTICS – III
(Pharmaceutical Technology II)
PH. THEORY 3 hours / Week

UNIT -I

1. Parenteral Products: Introduction to parenteral products and routes of administration. Formulation: Vehicles, additives. containers and closures. Facilities: Design of aseptic area, environmental control, traffic control, housekeeping, surface disinfection, air control, personnel. Processing: Cleaning of equipment, containers and closures, filling, sealing, sterilization, packaging and labeling. Evaluation of parenteral products

UNIT-II

2. Ophthalmic Preparations: Introduction, pharmacological categories of ophthalmic drugs, pharmaceutical requirements, packaging, administration. Contact lenses & its care and use solutions & evaluation of upcoming products.

UNIT-III

3. Pharmaceutical Aerosols: Definition, applications, components of aerosol package: Propellants, container, valve and actuator types. Formulation of pharmaceutical aerosols, manufacturing and filling methods, quality control tests.

UNIT –IV

4. Micro-encapsulation: Types of microcapsule, applications of microencapsulation in pharmacy, microencapsulation by co-acervation phase separation, multi orifice, spray drying, spray congealing, polymerization complex emulsion, air suspension technique, solvent evaporation and pan coating, evaluation of microcapsules.

UNIT -V

5. Packaging of Pharmaceutical Products: Packaging components: glass, plastic, metal, fibrous material, specifications and methods of evaluation of packaging component, Closure and Closure liners, Tamper Resistant Packaging, Regulatory and quality consideration.

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PRACTICAL

1. Preparation of SVP and LVP.
2. Evaluation of parenterals such as sterility test, pyrogen test (Rabbit and LAL test), clarity test, leakage test etc.
3. Filling and sealing of ampoules under aseptic condition.
4. Preparation and evaluation of ophthalmic solution, suspension, emulsion and ointment etc.
5. Preparation and evaluation of aerosols.
6. Preparation and evaluation of microcapsules by different methods such as ionic gelation, solvent evaporation, coacervation phase separation method etc.
7. Evaluation of glass containers.

8. Water vapor permeation studies.

RECOMMENDED BOOKS :

1. Bently's Textbook of pharmaceuticals edited by E.A. Rawlins
2. The Theory and Practice of Industrial Pharmacy by Lachmann, Libermann and Kanig