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Syllabus

UNIT – I

Introduction to the Profession of Pharmacy

1. **History of the Profession of Pharmacy in India:** In relation to pharmacy education, pharmaceutical industries and organizations—evolution, development and milestones.
2. **Scope of the Pharmacy Profession:** Role and responsibilities of pharmacists in retail/community pharmacy, hospital and clinical pharmacy, and industrial pharmacy including research and development.
3. **Pharmacopoeias:** Introduction to IP, BP, USP, BPC, International Pharmacopoeia, other pharmacopoeias and the National Formulary of India; structure and content of the Indian Pharmacopoeia; study of one model IP monograph.
4. **Prescription:** Structure and format/parts of prescription, handling of prescriptions, Latin terminology related to prescriptions.

UNIT – II

Introduction to Pharmaceutical Calculations and Dosage Forms

1. **Metric System of Weights and Measures;** calculations based on alligation, proof spirit, isotonic solutions, dilute solutions (percentage and ratio) and geometric dilution; scientific notation of units and measures.
2. **Posology:** Definition and dose calculation based on age, body weight and body surface area.
3. **Introduction to Route of Administration and Dosage Forms** Routes of administration and classification of dosage forms.
4. **Introduction to Active Pharmaceutical Ingredients and Excipients:** Definition, ideal characteristics and importance.

UNIT – III

Solid Dosage Forms

1. **Powders:** Classification, advantages and disadvantages; dusting powders, effervescent powders, efflorescent powders, hygroscopic powders and eutectic mixtures; introduction to excipients and methods of preparation.
2. **Tablets:** Definition, types of tablets including moulded tablets and pills with examples; advantages and disadvantages; introduction to excipients and methods of preparation.

3. **Capsules:** Definition, types of capsules, advantages and disadvantages, capsule sizes; introduction to excipients and methods of preparation.

UNIT – IV

Monophasic and Biphasic Liquid Dosage form

1. Monophasic Liquids

For internal use – aromatic waters, syrups, elixirs and linctus (definition and preparation).

For external use and body cavities – liniments, lotions, throat paints, applications, gargles, mouthwashes, enemas, eye drops, ear drops, nasal drops and tinctures with examples.

Study of official preparations- Introduction to excipients and methods of preparation.

2. Biphasic Liquids

- i. **Suspensions-** Definition and types (flocculated and deflocculated), advantages and disadvantages, formulation excipients and general methods of preparation.
- ii. **Emulsions-** Definition and types, emulsifying agents, tests for identification of types of emulsions, formulation excipients and general methods of preparation.

UNIT – V

Semisolid Dosage Forms

1. Definitions, Classification, Advantages & disadvantages, Ointment Bases and other excipients used in Semi-Solid Dosage Forms, General Methods of Preparation of Ointments, Pastes, Creams, and Gels
2. **Suppositories/Pessaries:** Definition, types of suppositories, advantages and disadvantages, formulation excipients used in suppositories, properties of ideal suppository bases, types of suppository bases, displacement value and general method of preparation.