

PHARMACEUTICS SYLLABUS

Chapter	Topic
1.	<ul style="list-style-type: none"> ▪ History of the profession of Pharmacy in India in relation to Pharmacy education, industry, pharmacy practice, and various professional associations. ○ Pharmacy as a career ○ Pharmacopoeia: Introduction to IP, BP, USP, NF and Extra Pharmacopoeia. Salient features of Indian Pharmacopoeia.
2.	Packaging materials: Types, selection criteria, advantages and disadvantages of glass, plastic, metal, rubber as packaging materials.
3.	<p>3.1 Pharmaceutical aids: Organoleptic (Colouring, flavouring and sweetening) agents.</p> <p>3.2 Preservatives: Definition, types with examples and uses.</p>
4.	<p>Unit operations: Definition, objectives/applications, principles, construction, and workings of:</p> <p>4.1 Size reduction: hammer mill and ball mill.</p> <p>4.2 Size separation: Classification of powders according to IP, Cyclone separator, Sieves and standards of sieves.</p> <p>4.3 Mixing: Double cone blender, Turbine mixer, Triple roller mill and Silverson mixer homogenizer.</p> <p>4.4 Filtration: Theory of filtration, membrane filter and sintered glass filter.</p> <p>4.5 Drying: working of fluidized bed dryer and process of freeze drying.</p> <p>4.6 Extraction: Definition, Classification, method, and applications.</p>
5.	<p>5.1 Tablets: coated and uncoated, various modified tablets (sustained release, extended-release, fast dissolving, multilayered, etc.)</p> <p>5.2 Capsules: hard and soft gelatin capsules.</p> <p>5.3 Liquid oral preparations: solution, syrup, elixir, emulsion, suspension, dry powder for reconstitution.</p> <p>5.4 Topical preparations: ointments, creams, pastes, gels, liniments and lotions, suppositories, and pessaries, Nasal preparations, Ear preparations.</p> <p>5.5 Powders and granules: Insufflations, dusting powders, effervescent powders, and effervescent granules.</p> <p>5.6 Sterile formulations: Injectables, eye drops and eye ointments.</p> <p>5.7 Immunological products: Sera, vaccines, toxoids and their manufacturing methods.</p>
6.	<p>6.1 Basic structure, layout, sections, and activities of pharmaceutical manufacturing plants</p> <p>6.2 Quality control and quality assurance: Definition and concepts of quality control and quality assurance, current good manufacturing practice (cGMP), Introduction to the concept of calibration and validation.</p>
7.	Novel drug delivery systems: Introduction, Classification with examples, advantages, and challenges.