



Pharmaceutics-III
Title: Pharmaceutics-III
Subject Code: 313 PHT
Semester: Sixth Semester (Third Year).
Duration: 2 + 1 Units (4 contact hours) per week.
Aims: To provide fundamental knowledge on formulation of dosage forms and preparation of semisolid and solid dosage forms.
Objectives: At the end of the course the student should be able to design and formulate different dosage forms and preparation of semisolid and solid dosage forms.
Contents: Lectures: PREFORMULATION STUDIES: Study of physical properties of drug like physical form, particle size, shape, density, wetting, dielectric constant, Solubility, dissolution and organoleptic properties and their effect on formulation, stability and bioavailability. TABLETS: Formulation of different types of tablets, granulation technology on large-scale by various techniques, physics of tablets making, different types of tablet compression machinery and the equipments employed, evaluation of tablets. COATING OF TABLETS: Types of coating, film forming materials, formulation of coating solution, equipments for coating process, evaluation of coated tablet. Stability kinetics and quality assurance CAPSULES: Advantages and disadvantages of capsule dosage form, material for production of hard gelatin capsule, size of capsules, methods of capsule filling, soft gelatin capsule shell and capsule content, importance of base absorption and



minimum/gm factors in soft capsule, quality control, stability testing and storage of capsule dosage forms.

LIQUID DOSAGE FORMS: Introduction, types of additives used in formulations, vehicles, stabilizers, preservatives, suspending agents, emulsifying agents, solubilizers, colors, flavours and others, Manufacturing packaging & evaluation of clear liquids, suspensions and emulsions.

SEMISOLID DOSAGE FORMS : Definitions, types, mechanisms of drug penetration, factors influencing penetration, semisolid bases and their selection, General formulation of semisolids, clear gels & manufacturing procedure, evaluation and packaging.

Practical: Preparations of different semisolids and solid dosage forms and their quality control.

Minimum course requirements: 30 (2 x 15) Unit lectures and 30 practical hour (3 x 15) per level.

Evaluation methods:

- Quizzes	10%
- Mid term examination	25%
- Practical examinations	25%
- Final examination (written)	40%

Text Books (latest editions):

- 1- Pharmaceutical Dosage Forms and Drug Delivery Systems, Haward C. Ansel.
- 2- Pharmaceutical Dosage Forms, Herbert A. Laurance, Vol. I, II.

Recommended books (latest editions):



1. J.W. Cooper, & G. Gunn, Tutorial Pharmacy, Petman Books Ltd., London.
2. Lachman L., Lieberman H.A, Kanig J.L, Theory and Practice of Industrial Pharmacy, Lea & Febiger, Philadelphia, U.S.A.
3. H.C. Ansel, Introduction to Pharmaceutical Dosage Forms, Lea & Febiger, Philadelphia, U.S.A.
4. R.L. Juliano, Drug Delivery Systems, Oxford University Press, Oxford.
5. Harrys Cosmetology
6. Balsam and Sagarin, Cosmetics: Science and Technology.
7. Thomssen E.G. Modern Cosmetics, Universal Publishing Corporation.
8. Mittal B.M. & Saha R.N.-a handbook of cosmetics, Vallabh Prakashan.