

1. **General Introduction and Scope of Pharmacognosy:** Historical development and scope of Pharmacognosy. Terminology Used in Pharmacognosy. An introduction of traditional Medical systems (Unani, Ayurvedic and Homoeopathic systems of medicine) with special reference to medicinal plants. Introduction to herbal pharmacopoeias and modern concepts about Pharmacognosy.
2. **Crude Drugs:** Crude drugs, commerce, preparation, chemical and therapeutic classifications of crude drugs (official and un-official drugs). Methods of Cultivation, Drying, Storage, Preservation and Packing.
3. **The study of the crude drugs belonging to various families of medicinal importance**

S. No.	Families	Crude Drugs
a.	Ranunculaceae	Aconitum, Larkspur, Pulsatilla, Hydrastis
b.	Papaveraceae	Papaver somniferum, Sanguinaria, Canadensis
c.	Leguminosae	Acacia, Glycyrrhiza, Senna, Cassia, Tamarind
d.	Umbelliferae	Fennel, Carum, Coriander, Conium, Asafoetida
e.	Apocynaceae	Rauwolfia, Catharanthus
f.	Asclepiadaceae	Gymnema sylvestre, Calotropis gigantean
g.	Compositae	Artemisia, Silybum marianum, Echinaceae, Arctium lappa
h.	Solanaceae	Belladonna, Hyoscyamus, Stramonium, Capsicum
i.	Scrophulariaceae	Digitalis, Verbascum (Mullien).
j.	Labiatae	Peppermint, Thyme, Spearmint, Salvia, Ocimum
k.	Liliaceae	Garlic, Colchicum, Aloe
l.	Zingiberaceae	Ginger, Curcuma

4. **Evaluation and Adulteration of Crude Drugs:** Evaluation of crude drugs i.e. Organoleptic, Microscopic, Physical, Chemical and Biological. Deterioration and Adulteration of crude drugs. Types of adulteration, inferiority, spoilage, admixture, sophistication and substitution of crude drugs.
5. **Drugs of Animal Origin:** General introduction and discussion about honey, gelatin, shellac, musk, civet, ambergris, cod liver oil, cantharides and spermaceti.
6. **Biologics:** Sources, structure, preparation, description and uses of vaccines, toxins, antitoxins, venoms, antivenoms, antiserums.
7. **Surgical Dressings:** Classification of fibers as vegetable, animals and synthetic fibers. Evaluation of fibers in surgical dressings, BPC standards for dressings and sutures. Discussion on cotton, wool, cellulose, rayon, catgut and nylon

8. **Pesticides:** Introduction, methods and control of pests with special reference to pyrethrum, tobacco, and other natural pesticides.
9. **Growth Regulators:** General account with special reference to plant hormones; Auxins, Gibberellins Abscisic acid and Cytokinins.
10. **Poisonous Plants including Allergens and Allergenic Preparations:** General introduction, case history, skin test, treatment of allergy, inhalant, ingestant, injectant, contactant, infectant and infestant allergens. Mechanism of allergy.
11. **Enzymes:** Enzymes obtained from plant source (Phytoenzymes). Papain Bromelain and Malt Extract. Enzymes obtained from Animal source. Rennin, pepsin, Pancreatin and Pancrealipase.

PHARMACOGNOSY-I (Basic) (Practical)

Paper 9

Marks 100

NOTE: Practicals of the subject shall be designed from time to time on the basis of the above mentioned theoretical topics and availability of the facilities, e.g. Introduction of the entire and broken parts of the plant drugs (Macro and organoleptic characters). Microscopic examination of powders and sections of plant drugs. Physicochemical and Microscopic testing of surgical dressings (Note: A minimum of 20 practicals will be conducted).

NOTE: A Study Tour will be an integral part of the syllabus and will be arranged at the end of the session for collection of medicinal plants from the country.

PHARMACEUTICS-III (PHARM. MICROBIOLOGY & IMMUNOLOGY) (Theory)

Paper 4

Marks 100

NOTE: The topics will be taught with special reference to their Pharmaceutical Applications.

1. **GENERAL MICROBIOLOGY:** Historical introduction, Scope of microbiology with special reference to Pharmaceutical Sciences. Nomenclature and classification of Micro-organisms.
2. **MICRO-ORGANISMS:**
 - a. **The Bacteria:** General and cellular Morphology, structure and function. Classification of Bacteria. Growth curve, growth factors and growth characteristics. Nutrition requirements and nutrition factors affecting growth. Culture Media, Bacterial cultures and staining Methods.
 - b. **The Viruses:** Introduction, Classification (and detail of at least one species from every group), cultivation and replication.
 - c. **The Fungi/Yeast/Molds:**
 - d. **The Protozoa:**