

14. CLINICAL USE OF HERBS & HERBAL MEDICINE:

Diabetes:	<i>Gymnema sylvestre, Melia azadirchta, Momordica charantia, Syzygium jambulana.</i>
Cardiac diseases:	<i>Digitalis spp., Convallaria majalis, Urgenia indica, Allium sativum, Punica granatum.</i>
Hepatitis:	<i>Berberis vulgaris, Picrorhiza kurroa, Lawsonia in.</i>
Respiratory diseases:	<i>Ficus religiosa, Adhatoda vasica.</i>
Skin diseases:	<i>Aloe vera, Angelica archangelica, Mentha piperita, Citrus spp., Commiphora mukul.</i>
CNS disorders:	<i>Strychnos nux-vomica, Datura stramonium, Cannabis sativa, Papaver somniferum, Atropa belladonna.</i>
Musculo-skeletal disorders:	<i>Nigella sativa, Phycotis ajowan, Trigonella foenum-graecum, Zingiber officinale.</i>
Renal disorders:	<i>Cucumis melo, Berberis vulgaris, Zea mays, Tribulus terrestris.</i>
Reproductive disorders:	<i>Saraca indica, Ruta graveolens, Nigella sativa, Glycyrrhiza glabra, Claviceps purpurea, Myristica fragrance.</i>
G.I.T. disorders:	<i>Foeniculum vulgare, Ferula foetida, Cuminum cyminum, Aegle marmelos, Prunus domestica.</i>

PHARMACOGNOSY-II (ADVANCED) (Practical)

Paper 9

Marks 100

NOTE: Practical 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. Extraction of the active constituents of crude drugs and chemical tests for their identification. Isolation and separation of active constituents of crude drugs by paper and thin layer chromatography.

Also include the following experiments;

- Determination of Iodine value; Saponification value and unsaponifiable matter; ester value; Acid value.
- Chemical tests for Acacia, Tragacanth, Agar, Starch, Lipids, (Castor oil, Sesame oil, Shark liver oil, Bees wax), Gelatin.

(Note: A minimum of 20 practicals will be conducted).

PHARMACY PRACTICE-II (DISPENSING, COMMUNITY, SOCIAL & ADMINISTRATIVE PHARMACY)

(Theory)

Paper 4

Marks 40+60

PART A: (DISPENSING):

(40 MARKS)

1. BASIC PRINCIPLES OF COMPOUNDING AND DISPENSING INCLUDING:
Fundamental operations in Compounding, Containers and closures for Dispensed Products,

Prescription-Handling (Parts of Prescription, Filling, Interpretation, Pricing) and Labelling of Dispensed Medication.

2. **EXTEMPORANEOUS DISPENSING:** Solutions, Suspensions, Emulsions, Creams, Ointments, Pastes and gels, Suppositories and pessaries, Powders and granules and Oral unit dosage form.
3. **PHARMACEUTICAL INCOMPATIBILITIES:** Types of Incompatibilities, manifestations, Correction and Prevention with reference to typical examples.

PART B: (COMMUNITY, SOCIAL & ADMINISTRATIVE PHARMACY): (60 MARKS)

1. **DEFINITIONS AND BACKGROUND:**
2. **PUBLIC HEALTH AND COMMUNITY PHARMACY:** Epidemiology & its Control, Epidemiological methodology with a focus on specific disease states, Pharmacoepidemiology (including Drug Utilization Review). Preventive Health (EPI & CDC), Family Planning and Health Policy.
3. **MEDICAL COMPLICATION OF DRUG TAKING:** General and Socio-economic Aspects.
4. **PATIENT EDUCATION AND COUNSELLING:**
5. **CONTROL OF DRUG ABUSE AND MISUSE:**
6. **ROLE OF PHARMACIST:** As Public Health Educator in the Community for Drug Monitoring and Drug Information.
7. **HEALTH SYSTEM RESEARCH:** Knowledge skills of research methods, epidemiologic study design, experimental study design, Pre- and post-marketing surveys, Application of various statistical procedures in Pharmacy and Medical Research, causality assessment as well as the sensitivity and specificity tests in pharmacy practice.
8. **PHARMACOECONOMICS:** Pharmacoeconomic modelling and interpretation.
9. **ALTERNATIVE THERAPIES:** Background, philosophy and use of complementary and alternative therapies including herbal medicines, homoeopathy, acupuncture, acupressure, Bach Flower remedies, aromatherapy and reflexology.
10. **PHARMACY LAYOUT DESIGN:** Objectives of Layout Design, Types of Community Pharmacies (Pharmaceutical Centre, Prescription-oriented Pharmacies, Traditional Pharmacies and The Super Drug Store), Consumer goods and purchases, Classes of Layout designs, Principles and characteristics of Layout Design and Traffic Flow analysis.

PHARMACY PRACTICE-II (DISPENSING, COMMUNITY, SOCIAL & ADMINISTRATIVE PHARMACY)

(Practical)

Paper 10

Marks 100

NOTE: Practical 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. Practical introduction to prescription-handling, interpretation, filling and labelling.

Mixtures: Dispensing of simple mixtures containing soluble substances only, mixtures containing diffusible substances, in-diffusible substances and mixtures forming precipitate.

Powders: Dispensing of simple powders, compound powders and effervescent powders for external use.

Incompatibility: Practical Importance of Incompatibilities

Ointments And Creams: Dispensing of iodine and methyl salicylate ointment. Dispensing of cold cream and vanishing creams.

Cosmetics: Lipstick, talcum powder, after shave lotion, shaving cream.

(Note: A minimum of 20 practicals will be conducted).

Health Science Research Project: In the area of health care system, community pharmacy. Establishment of DIC, PCC,

PHARMACEUTICAL CHEMISTRY-III (PHARMACEUTICAL ANALYSIS) (Theory)

Paper 5

Marks 100

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

- 1. SPECTROSCOPIC METHODS:** Theory, Instrumentation and Pharmaceutical applications of the following Spectroscopic Methods:
 - b. Atomic Absorption and Emission Spectroscopy
 - c. Molecular fluorescence spectroscopy
 - d. Flame Photometry
 - e. I.R. Spectroscopy
 - f. Mass Spectroscopy
 - g. NMR Spectroscopy
 - h. U.V./Visible Spectroscopy
- 2. CHROMATOGRAPHIC METHODS:** Column Chromatography, Thin Layer Chromatography, Gas Liquid Chromatography, HPLC, LCMS, GCMS, Capillary Electrophoresis.
- 3. ELECTRO CHEMICAL METHODS:** Potentiometry, Polarography and Radiochemical Techniques.
- 4. THERMAL ANALYSIS:** Differential Scanning Calorimetry, Differential Thermal Analysis, Thermo Gravimetric Analysis.
- 5. OCCURENCE, PROPERTIES, PREPARATION AND APPLICATION OF OFFICIAL INORGANIC COMPOUNDS:** Aluminium Hydroxide, Ammonium Chloride, Sodium