

Carbonate, Magnesium Carbonate, Lithium Carbonate, Sodium Nitrite, Calcium Gluconate, Antimony Gluconate, Ferrous Fumarate, Ferrous Sulfate and Silver Nitrate.

6. **TITRIMETRIC ANALYSIS:** Acid-base titration, Oxidation-reduction titration, Argentometric titration, Complexometric titration, Non-aqueous titration etc.

PHARMACEUTICAL CHEMISTRY-III (PHARMACEUTICAL ANALYSIS) (Practical)
<u>Paper 11</u> <u>Marks 100</u>

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 requirements e.g. Determination of the Purity and Composition of the unknown drugs by using at least each of the above techniques. (Note: A minimum of 20 practicals will be conducted).

PHARMACY PRACTICE-III (COMPUTER AND ITS APPLICATION IN PHARMACY) (Theory)
<u>Paper 6</u> <u>Marks 50</u>

1. **FUNDAMENTALS BASIC CONCEPT OF COMPUTERS:** History of Data Processing, Types of Computers, Components of a Computer, Computer System and Business Computer System, Backing Storage Devices, Unit of Memory, Viruses and Anti-viruses Issues.
2. **RESEARCH METHODOLOGIES:**
3. **SYSTEM ANALYSIS AND DESIGN:** What is a System?, Steps in system life cycle, Data Gathering and Data Analysis, Designing a New System, Development and Implementation of New System, Documentation.
4. **DATA PROCESSING:** Data Processing, The Data Processing Cycle, The Collection and Computing of data, Manual collection of data, The main methods of data input, Devices used to collect data, Data Verification, Data Validation, Output and Recording of data, Types of data processing systems, Types of Computer Operation, Batch Processing and Real-time Processing.
5. **APPLICATION OF COMPUTERS IN HOSPITAL PHARMACY:** Patterns of Computer use in Hospital Pharmacy, Patient record database management, Medication order entry, Drug labels and list, Intravenous solution and admixture, Patient Medication profiles, Inventory control, Management report & Statistics.
6. **APPLICATION OF COMPUTER IN COMMUNITY PHARMACY:** Computerizing the Prescription Dispensing process, Use of Computers for Pharmaceutical Care in community pharmacy, Accounting and General Ledger system.
7. **APPLICATION OF DRUG INFORMATION RETRIEVAL & STORAGE:** Introduction Advantages of Computerized Literature Retrieval use of Computerized Retrieval.
8. **DATA ANALYSIS:** Introduction and implementations of statistical design and test. Students T-test, Chi Square, ANOVA using statistical packages like SPSS, Med Calc, Kinetica etc.

PHARMACY PRACTICE-III (COMPUTER AND ITS APPLICATION IN PHARMACY) Practical

Paper 12

Marks 50

1. **INTERNET AND E-MAIL:** Internet and Microsoft Internet Explorer 5, Addresses, Links and Downloading, Searching the Internet, E-mail and Newsgroups, Favourites, security and Customizing Explorer.
2. **WEB PAGE DEVELOPMENT:** Introduction to Front-page, Creating a First Web site, Basic Formatting Techniques, Manipulating Tables within Front-page, Front-page, Picture and MultiMedia, Hyper linking, Bookmarks and Image Maps, Introducing Front-page “components”, Front-page and Frames, Managing your Web, Good site design, Publishing and publicizing.
3. **DATA PRESENTATION SKILLS:** MS-Word, MS-Excel, MS-Power point.
4. **UNDERSTANDING AND APPLICATION OF STATISTICAL PACKAGES:** SPSS, Kinetica, Med Calc.

FOURTH PROFESSIONAL

PHARMACY PRACTICE-IV (HOSPITAL PHARMACY) (Theory)

Paper 1

Marks 100

1. **INTRODUCTION:**
 - a. Role of Pharmacist in Hospital
 - b. Minimum standards for pharmacies in Institutions/Hospitals
 - c. Research in Hospital Pharmacy
2. **HOSPITAL AND ITS ORGANIZATION:**
 - a. Classification of Hospitals
 - b. Organizational Pattern
 - c. Administration
 - d. Clinical Departments
 - e. Nursing, Dietetic, Pathology, Blood Bank, Radiology and other supportive services etc.
 - f. Role of Pharmacy in Hospital
 - g. Hospital Finances
3. **PHARMACY, ITS ORGANIZATION AND PERSONNEL:**
 - a. Pharmacy specialist
 - b. Drug information Centre
 - c. Poison Control Centre and Antidote Bank
 - d. Pharmacy Education
 - e. Determining the Need of Professional and other departmental staff
 - f. Professional services rendered