



## **Ph.D / M.Tech by Res. ENTRANCE EXAMINATION - 2019**

### **QUESTION PAPER FORMAT**

#	TYPE	MAXIMUM MARKS
I	WRITTEN	
a	PART A – Research Methodology	50 Marks (25 Questions of 2 Marks Each)
b	PART B – Technical Paper	50 Marks (25 Questions of 2 Marks Each)
II	VIVA-VOCE	
c	PART C – Technical Interview	50 Marks

## **Ph.D / M.Tech by Res. Syllabus**

### **PART A**

#### **EPHM001: RESEARCH METHODOLOGY (COMMON TO ALL PROGRAMS)**

- I. Research:**  
Meaning, Objectives and Characteristics of Research, Types of Research , Research Process, Problem Statement, Literature Survey, Importance, Sources, Identifying Gap Areas, Development Of Working Hypothesis.
- II. Hypothesis:**  
Variables, Development of Working Hypothesis, Deriving Objectives of Research, Sampling, Material and Methods, Data Analysis, Results and Discussion: Discussion, Purpose and Function of Discussion
- III. Research Design:**  
Basic Principles; Features of Good Design, Methods; Developing a Research Plan,

Determining Experimental and Sample Designs, Summary and Conclusions, Abstract-Key Words; References; Citation Styles

**IV. Report And Article Writing:**

Structure and Components; Types of Report; Technical Reports and Thesis; Significance; Preparation; Layout, Structure and Language of Typical Reports; Presentation; Effective Communication. **Scientific Article Writing:** Title Preparation; List of Authors and Addresses, Abstracts; Economy of Words

**V. Research Proposal Fundamentals:**

Grant Proposal, Proposal Parts; Research Ethics, Relationship in Research Groups; Hazards to Good Scientific Practice; Scientific Misconduct, Intellectual Property Rights, Patents, Copyrights, Trademarks

## **PART B: TECHNICAL PAPER**

### **EPHM016: TECHNICAL PAPER -Pharmacy Practice ( for M Pharm - Pharmacy Practice and Pharm.D)**

#### **Unit- I to Unit- VII**

**Pharmacotherapeutics:-** Etiopathogenesis and pharmacotherapy of diseases associated with following systems/diseases

#### **UNIT- I:**

- a.** Hypertension, Asthma, Diabetes mellitus and Osteoporosis.
- b.** Prescribing Guidelines for Pediatric, Geriatric and Pregnancy and Breastfeeding, Rational Drug Use.

#### **UNIT- II**

Tuberculosis, Meningitis, Respiratory tract infections, Urinary tract infections, HIV,

#### **UNIT- III**

Rheumatoid arthritis, Gout and Osteoarthritis. Acute and Chronic Renal Failure

#### **UNIT - IV**

Chemotherapy of breast cancer, leukemia and management of chemotherapy induced nausea and emesis.

#### **UNIT - V**

Peptic ulcer disease, Gastro Esophageal Reflux Disease, Inflammatory bowel disease, Alcoholic liver disease, Viral hepatitis,

#### **UNIT - VI**

Anaemias, Venous thromboembolism, Epilepsy, Parkinsonism, Stroke, Alzheimer's disease.

#### **UNIT - VII**

Schizophrenia, bipolar disorder, Anxiety disorders, Obsessive Compulsive disorders, Headache, pain management.

#### **UNIT- VIII**

##### **Hospital pharmacy services**

Procurement & warehousing of drugs and Pharmaceuticals, Inventory control- Definition, various methods of Inventory Control, ABC, VED, EOQ, Lead time, safety stock, Drug distribution in the hospital, Individual prescription method, Floor stock method, Unit dose drug distribution method, Distribution of Narcotic and other controlled substances,

#### **UNIT- IX**

##### **Essential skills for Clinical Pharmacy Practice**

Drug therapy monitoring (medication chart review, clinical review, pharmacist interventions), Clinical laboratory tests used in the evaluation of disease states, and

interpretation of test results. Adverse drug reactions, Pharmaceutical care. Patient counseling, Patient medication adherence,

## **UNIT- X**

### **a. Clinical Research**

Drug development process, Clinical development of drug.

### **b. Pharmacoepidemiology and Pharmacoeconomics**

Measurement of outcomes in Pharmacoepidemiology, Concept of risk in Pharmacoepidemiology, Pharmacoepidemiological methods, Pharmacoeconomics.

### **c. Clinical Pharmacokinetics and Drug Therapeutic Monitoring**

Design of dosage regimens, Pharmacokinetics of Drug Interaction, Therapeutic Drug monitoring, Dosage adjustment in Renal and hepatic Disease. Population Pharmacokinetics. Pharmacogenetics.

## Reference books

1. Pharmacotherapy: A Pathophysiologic approach - Joseph T. Dipiro et al. Appleton & Lange
2. Clinical Pharmacy and Therapeutics - Roger and Walker, Churchill Livingstone publication
3. Hospital pharmacy by William .E. Hassan
4. A text book of Clinical Pharmacy Practice; Essential concepts and skills, Dr.G.Parthasarathi et al, Orient Orient Langram Pvt.Ltd. ISSN8125026
5. Therapeutic Drug Monitoring: Newer Drugs and Biomarkers by Amitava D
6. Textbook of Pharmacoepidemiology, Third Edition by Brian L. Strom