

<b>Name of Course</b>	Pharmacology (Practical)
<b>Marks</b>	100 Marks
<b>Introduction</b>	Pharmacology is the study of drugs, their sources, chemical properties, and effects on living organisms. This course introduces students to the basic principles and concepts of pharmacology. It includes the study of different routes of drug administration, posology, dose calculations, and factors that modify the action and dosage of drugs. Students will also learn about the drugs that act on various systems in the body, including the autonomic nervous system, gastrointestinal tract, central nervous system, respiratory system, cardiovascular system, and genitourinary system. The course will also cover autacoids and their antagonists, drugs used in anesthesia, chemotherapy, and toxicology. Students will gain an understanding of the therapeutic and adverse effects of drugs, drug interactions, and the importance of pharmacovigilance.
<b>Learning Outcome</b>	<p>At the end of the course, the students should be able to:</p> <ul style="list-style-type: none"> <li>• Understand the basic concepts and principles of pharmacology, including the routes of drug administration, posology, dose calculations, and modifying the action and dosage of drugs.</li> <li>• Identify the drugs acting on various systems of the body, including the autonomic nervous system, gastrointestinal tract, central nervous system, respiratory system, cardiovascular system, genito-urinary system, and autacoids.</li> <li>• Explain the mechanism of action, therapeutic uses, adverse effects, drug interactions, and contraindications of the drugs acting on various systems of the body.</li> <li>• Understand the principles of chemotherapy and the rational use of antimicrobial, antineoplastic, and immunomodulatory agents.</li> <li>• Understand the basic principles of toxicology, including the mechanisms of toxicity, factors affecting toxicity, and methods of toxicity evaluation.</li> <li>• Understand the principles of pharmacovigilance, drug regulation, and drug information services.</li> <li>• Develop skills in interpreting drug information, including drug labels, drug monographs, and drug interaction databases.</li> <li>• Apply knowledge of pharmacology to the safe and effective use of drugs in patient care, including patient assessment, drug selection, dosage adjustment, and patient education.</li> <li>• Develop an understanding of ethical and legal aspects of pharmacology, including informed consent, confidentiality, and drug misuse and abuse.</li> </ul>

### Curriculum

1. Preparation of standard solution.
  - a. Ringer solution.
  - b. Kreb solution
  - c. Tyrode solution.
  - d. Normal saline solution
2. To demonstrate the effects of Adrenaline and Acetylcholine on Frog's heart.
3. To study the effects of Adrenaline on Rabbit's Eyes.
4. To study the effects of Homatropine on Rabbit's Eyes.
5. To study the effects of Pilocarpine on Rabbit's Eyes.
6. To study the effects of Local Anaesthetic drug (e.g Cocaine) on Rabbit's Eyes.
7. To study the anticoagulant effects of Heparin and oral anticoagulants on Rabbits.

<b>Name of Course</b>	Pharmacology (Written)
<b>Marks</b>	100 Marks
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<b>Learning Outcome</b>	<p>At the end of the course, the students should be able to:</p> <ul style="list-style-type: none"> <li>• Understand the basic concepts and principles of pharmacology, including the routes of drug administration, posology, dose calculations, and modifying the action and dosage of drugs.</li> <li>• Identify the drugs acting on various systems of the body, including the autonomic nervous system, gastrointestinal tract, central nervous system, respiratory system, cardiovascular system, genito-urinary system, and autacoids.</li> <li>• Explain the mechanism of action, therapeutic uses, adverse effects, drug interactions, and contraindications of the drugs acting on various systems of the body.</li> <li>• Understand the principles of chemotherapy and the rational use of antimicrobial, antineoplastic, and immunomodulatory agents.</li> <li>• Understand the basic principles of toxicology, including the mechanisms of toxicity, factors affecting toxicity, and methods of toxicity evaluation.</li> <li>• Understand the principles of pharmacovigilance, drug regulation, and drug information services.</li> <li>• Develop skills in interpreting drug information, including drug labels, drug monographs, and drug interaction databases.</li> <li>• Apply knowledge of pharmacology to the safe and effective use of drugs in patient care, including patient assessment, drug selection, dosage adjustment, and patient education.</li> <li>• Develop an understanding of ethical and legal aspects of pharmacology, including informed consent, confidentiality, and drug misuse and abuse.</li> </ul>

### Curriculum

1. Introduction to Pharmacology
2. Routes of drugs administration
3. Posology, Dose calculations, modifying the action & dosage of drugs.
4. Yong's Formula and Clark's Formula, Factors
5. General introduction to the drugs acting on various systems along with an explanation of one Prototype drug:
  - a. Autonomic Nervous System
  - b. Gastrointestinal Tract
  - c. Central Nervous System
  - d. Respiratory System
6. Cardiovascular System
7. Introduction to Autacoids and their Antagonists Introduction to Drugs Used in Anesthetics
8. Introduction to Chemotherapy
9. Introduction to Toxicology
10. Genito-Urinary System