



**RAWAL MEDICAL COLLEGE**  
**RAWAL INSTITUTE OF HEALTH**  
**SCIENCES ISLAMABAD**

**THIRD YEAR MBBS**

**BATCH 2020 – 2025**

**STUDY GUIDE**

**BLOCK VIII**

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# INTRODUCTION

We welcome third year MBBS students to their new academic session. During this session i.e. (Block VIII). Student will learn general concepts of pharmacology, pathology, & Forensic Medicine with some overview Of Medicine, Surgery, Special Sciences, Gynae/obs, Psychiatry and Pediatrics.

Therapeutics is a vibrant field of Medical Sciences that deals with drugs and their clinical uses in a rational manner based on their mode of action, kinetic and adverse effect profile .Pharmacology & Pathology are the preclinical subjects in the medical curriculum, which form an integral link between basic & the clinical sciences. As the horizon of pharmacology has broadened due to expansion of Neurophysiology, Biochemistry, & the newly emerging field of Biochemistry ; in this module the knowledge of sources of drugs , their trans membrane permeation & partitioning across body membrane , their distribution & redistribution to various body compartments , their biotransformation & elimination will be shared. Pharmacology involving various receptor interaction, adverse effect profile, toxicities & drug interaction, all of which are important determinants of rational drug therapies will also be learnt. To enhance student's participation as active learners and to develop their skills of continuous medical education (CME), updates on pharmacological news, small projects, and presentations will be carried out throughout the session. Students will be awarded with score in internal assessment and certificates as incentives for participating in such activities.

In Pathology students will be introduced about General Pathology and Microbiology. The Microbiology session will cover basic bacteriology, immunity, cellular basic of immune response. Antibiotics and bacterial genetics. General pathology involves the study of the mechanism behind cell and tissues injury as well as understanding how the body responds to and repairs injury. Examples of areas that may be studied include necrosis, neoplastic wound healing, inflammation and how cells adapt to injury. Through understanding in these areas is applied in the diagnosis of disease. In hematology, the students will get familiar with different disease aspects that affect the blood, including bleeding disorder. Clotting problems, and anemias. In the systemic Pathology major the students will learn to investigate consequences of injury to different organs and systems of the body.

Forensic Medicine (also commonly known as Medical Jurisprudence) is also an essential subject for undergraduate medical students in Pakistan. Because medico- legal duties are required to be perform by the general medical officer under the law of Pakistan, the medical student is expected to know the major legal aspect of the profession and his legal duties towards the state, especially in documenting evidence injury, assault, poisoning, and criminal or suspicious deaths. The subject of medical ethics is a sub-component of forensic medicine. In addition, the forensic aspect of toxicology constitute an integral part of the subject. The subject of the forensic medicine (Medical Jurisprudence) and Medical Ethics is also required by the World Federation for Medical Education (WFME) to be essentially incorporated in curriculum of Basic medical education.

## **General Learning Objectives:**

**By the end of this module, the students will be able to:**

- ❖ Describe the detailed features of cell injury, inflammation and immunology and concepts of bacteriology and microbiology.
- ❖ Explain the neoplasia, molecular basis of cancer, pathways of spread & lab diagnosis.
- ❖ Describe various terminologies related to general pharmacology and concepts of pharmacokinetics & pharmacodynamics.
- ❖ Identify and describe different drug classes acting on autonomic nervous system.
- ❖ Explain the pathology of hematopoietic system and details of drugs used to treat various hematopoietic disorders.
- ❖ Define the role of doctor in the medico legal system.
- ❖ Document information for legal procedures, and write certification of death according to will guidelines.
- ❖ Maintain highest ethical principles in medical examination while obtaining consent, euthanast biomedical research etc. in keeping with the norms of society.
- ❖ Describe methods for assessment of fatal period, postmortem interval and autopsy procedures.

## **Teaching / Learning Methods:**

**The teaching and learning session of this module will be of diverse types:**

- Large group interactive sessions (LGIS)
- Small group teaching (SGD) will include tutorials.
- Practical sessions will comprise of practical laboratory demonstrations and performance.
- Seminars: on different topics, in which student will make oral presentation in different aspects of the allocated topics.
- Self –directed learning sessions (SDL): This is the time during which students are expected to revise what they have learnt in the class, clear their concepts by consulting different text books, reference material and prepare their assignment and projects.
- Problem Based Learning (PBL)
- Case Based Learning (CBL)

## Students Assessment:

- At the end of module 1 and 2 there will be an examination which will comprise of written assessment of three duration comprising

One best type of multiple choice questions (MCQs)

- At the of block VII, Assessment will include both the:

- Theory paper
- Practical / Lab examination

The practical examination will comprise of objective structured practical examination (OSPE) and viva voce. The OSPE will include both observed and non- observed stations.

The OSPE / Viva voice will be conducted in batches. The students will be having OSPE / Practical labs in the subjects of Pathology. Pharmacology and Forensic Medicine.

### ➤ **Seminars:**

Assessment of seminar presentation will be done in the following categories.

<i>Seminar Presentation</i>								
Student Name	Seminar Topic	Facilitator	Marks					
			Subject Knowledge (05)	Body Language (01)	Interaction With audience (01)	Standard of presentation (02)	Delivery Style (0.5)	Attitude Towards Questioning (0.5)

# Study Guide

## Block – VIII

### Module – IV Respiration and Endocrinology

### Module – V Cardiovascular and chemotherapy

## Pathology:

Sr.no.	Learning objective by the end of the session, student will be able to	<u>Content area</u> <u>Module – 4 Respiration and</u> <u>Endocrinology</u>	TEACHING ACTIVITY	ASSESST. (MCQ's / SEQ's)
1)	<p>List the etiological agents of upper respiratory tract infections.</p> <p>Discuss the etiology, natural history and complications of acute pharyngitis.</p> <p>Discuss the pathogenesis and presenting symptoms of allergic rhinitis.</p> <p>Describe pathogenesis and morphological features of pulmonary edema and acute lung injury.</p> <p>Describe acute respiratory distress syndrome.</p>	<p><b><u>RESPIRATORY</u></b></p> <ul style="list-style-type: none"> <li>• Upper Respiratory tract infections</li> <li>• Pulmonary edema</li> <li>• Acute lung injury</li> <li>• ARDS</li> </ul>	<p>LGIS 3HR</p>	<p>MCQs SEQs SAQs VIVA</p>
2)	<p>Define COPD? Enumerate its types? List the etiological agents and describe the clinical features of COPD along with morphological findings?</p>	<p>COPD (Emphysema, Chronic bronchitis, Asthma, and Bronchiectasis)</p>	<p>LGIS 2HR + SGD 1HR</p>	<p>MCQs SEQs SAQs VIVA</p>
3)	<p>Discuss the etiology, clinical features, morphology and complications of pneumonia and Lungs abscess.</p>	<p>Pneumonia (Community acquired acute pneumonia, community acquired atypical pneumonia, Aspiration pneumonia, Chronic pneumonia, Necrotizing pneumonia) + Lung abscess.</p>	<p>LGIS + 2HR SGD 1hour</p>	<p>MCQs SEQs SAQs VIVA</p>

4)	<p>Discuss the pathogenesis, clinical presentation, morphology, lab findings and complications of pulmonary Tuberculosis and other granulomatous disorders.</p> <p>Diseases of vascular origin.</p>	<ul style="list-style-type: none"> <li>• Pulmonary Tuberculosis</li> <li>• Granulomatous Diseases (Sarcoidosis, Hypersensitivity pneumonitis)</li> <li>• Pulmonary vascular diseases (Pulmonary embolism, hemorrhage and infarction)</li> <li>• Relevant Diagnostic tests.</li> </ul>	<p>LGIS 3HR</p>	<p>MCQs SEQs SAQs VIVA</p>
5)	<p>What do u mean by Restrictive lung diseases (ILD)? Its pathogenesis and morphology features?</p> <p>Differentiate between obstructive and restrictive lung diseases on the basis of pulmonary function tests?</p> <p>List the common occupational lung diseases, natural history and complications of occupational lung diseases.</p>	<ul style="list-style-type: none"> <li>• Restrictive lung diseases</li> <li>• Pneumoconioses (Asbestosis, silicosis, Coal worker's pneumoconiosis)</li> </ul>	<p>LGIS 2HR SGD 01</p>	<p>MCQs SEQs SAQs VIVA</p>
6)	<p>Discuss the etiology, pathogenesis, classification of lung cancers and pleural disorders.</p>	<ul style="list-style-type: none"> <li>• Lung cancers (SSC, Adeno CA, Adenosquamous CA, Large cell CA, small cell CA, Neuroendocrine tumors)</li> <li>• Pleural disorders (Pleural effusion, pneumothorax, Mesothelioma)</li> </ul> <p><b>PRACTICAL:</b> (6 hours Chronic bronchitis, Emphysema, Bronchiectasis, Asthma, Tuberculosis, Pneumonia.</p>	<p>LGIS 02 HR</p>	



Sr.no.	Learning objective by the end of the session, student will be able to	Content area <u>Module – 4 Endocrinology</u>	TEACHING ACTIVITY	ASSESST. (MCQ's / SEQ's)
1)	<p><b>Pituitary gland:</b></p> <p>List the cause of hypo and hyperpituitarism? Describe the clinical features of pituitary adenomas?</p> <p>Describe the clinical features of acromegaly and gigantism? List the causes and describe the clinical features and laboratory diagnosis of diabetes insipidus.</p> <p>Describe the etiology, clinical features, pathogenesis and lab findings in cases of syndrome of inappropriate secretion of antidiuretic hormone (SIADH)</p>	<p><b>Endocrinology</b></p> <p><b><u>Pituitary</u></b></p> <ul style="list-style-type: none"> <li>• Hypopituitary disorders</li> <li>• Hyperpituitary disorders</li> <li>• Tumors</li> </ul>	<p>LGIS 2 HR</p>	<p>MCQs SEQs SAQs VIVA</p>
2)	<p><b>Adrenal Cortex and Medulla:</b></p> <p>Discuss the etiology, pathogenesis, clinical features and lab diagnosis of cushing syndrome? Discuss the etiology, pathogenesis, clinical features and lab diagnosis of Hyperaldosteronism.</p> <p>Discuss the etiology, pathogenesis, clinical features and lab diagnosis of Adrenogenital syndrome?</p> <p>Discuss the causes and clinical features of adrenal insufficiency? Describe the clinical features and diagnosis of pheochromocytoma.</p>	<p><b>Adrenal cortex and Medulla</b></p> <ul style="list-style-type: none"> <li>• Hypo and Hyper disorders</li> <li>• Tumors</li> </ul>	<p>LGIS 3 HR + SGD 2 HR</p>	<p>MCQs SEQs SAQs VIVA</p>
3)	<p><b><u>Parathyroid:</u></b></p> <p>Discuss the causes, clinical presentations and diagnostic workup of hypercalcemia and hypocalcemia? Describe the morphology and clinical features of parathyroid adenoma and adenocarcinoma.</p>	<p><b>Parathyroid</b></p> <ul style="list-style-type: none"> <li>• Hypo and Hyper disorders</li> <li>• Tumors</li> </ul>	<p>LGIS 4 HR + SGD 4 HR</p>	<p>MCQs SEQs SAQs VIVA</p>

	<p><b><u>Thyroid:</u></b> Discuss the differential diagnosis and diagnostic workup of thyroid swelling? Describe the etiology, pathogenesis, clinical features and laboratory investigations of the Hyperthyroidism including Grave's disease.</p> <p>Discuss the etiology, pathogenesis, clinical features and lab diagnosis of Hypothyroidism and diffuse of multinodular goiter?</p> <p>Describe the pathogenesis and clinical features of Hashimoto's thyroiditis and briefly other types of thyroiditis?</p> <p>Enumerate benign and malignant neoplasms of thyroid gland and describe their morphology and clinical presentation?</p>	<p><b>Thyroid</b></p> <ul style="list-style-type: none"> <li>• Hypo and Hyper disorders</li> <li>• Thyroiditis</li> <li>• Tumors</li> </ul>		
4)	<p><b><u>Endocrine Pancreas:</u></b></p> <p>Discuss the etiology, pathogenesis, clinical manifestations and complications of diabetes mellitus?</p>	<p><b>Endocrine pancreas</b></p> <ul style="list-style-type: none"> <li>• Diabetes I &amp; II</li> </ul> <p>Relevant diagnosis tests</p>	<p>LGIS 2HR + SGD 2 HRS</p>	<p>MCQs SEQs SAQs VIVA</p>
5)	<p><b><u>Exocrine pancreas:</u></b></p> <p>Discuss the etiology, pathogenesis, clinical manifestation and diagnostic features of pancreatitis and tumors of pancreas.</p>	<p><b>Exocrine Pancreas</b></p> <ul style="list-style-type: none"> <li>• Pancreatitis (Acute &amp; Chronic)</li> <li>• Tumors of pancreas</li> </ul> <p><b>PRACTICAL: (04 HOURS)</b></p> <ul style="list-style-type: none"> <li>➤ Thyroiditis</li> <li>➤ Thyroid tumors</li> <li>➤ Adrenal disorders</li> <li>➤ Diabetes mellitus</li> <li>➤ Acute &amp; Chronic</li> <li>➤ Pancreatitis</li> <li>➤ Relevant Lab</li> <li>➤ Investigations</li> </ul>	<p>LGIS 3 HR + SGD 2 HRS</p>	<p>MCQs SEQs SAQs VIVA</p>

Sr.no.	Learning objective by the end of the session, student will be able to	Content area Module – 4 Respiration and endocrinology	TEACHING ACTIVITY DURATION	Assessment
1)	<p><b><u>Respiratory system</u></b></p> <p>Describe the pathogenesis, Brief clinical features, and prevention and diagnosis upper respiratory tract infections.</p>	<p><b><u>Microbiology:</u></b>  <b>Bacteria causing upper respiratory tract infections</b>            Classification of streptococci/ streptococcus pyogenes            Haemophilus influenza            Corynebacterium diphtheria</p> <p><b><u>Virology</u></b>            Viruses causing upper respiratory tract infections (Rhinoviruses, Corona viruses, Respiratory Syncytial virus (RSV) Adenoviruses, Enteroviruses.</p>	<p>LGIS            2HR + SGD            2HR</p>	<p>MCQs            SEQs            SAQs            VIVA</p>
2)	<p>Describe the pathogenesis, Brief clinical features, prevention and diagnosis of <b>Lower respiratory tract infections</b></p> <ul style="list-style-type: none"> <li>• <b>Pneumonias</b></li> <li>• <b>Other infections viral</b></li> <li>• <b>Bacterial Fungal</b></li> </ul>	<p><b>Bacteria causing lower respiratory tract infections</b></p> <p>➤ <b>Pneumonias</b>            Streptococcus pneumonia            Staphylococcus aureus            Gram negative rods causing lower respiratory tract infections (E coli, Proteus, Klebsiella, enterobacter, pseudomonas serratia)</p> <p>➤ <b>Other Infections</b>            Miscellaneous bacteria causing lower respiratory tract infections Bordetella pertussis Mycoplasma pneumonia, Legionella pneumophila, Bacillus anthracis chlamydia (C psittaci, C pneumoniae), Nocardia, Anaerobes)</p> <p>➤ <b>Viral Infections of lower respiratory tract</b>            Mumps, Influenza, RSV, Parainfluenza, Rhinoviruses viruses, Corona viruses’ Atypical pneumonia.</p> <p>➤ <b>Parasitology</b>            Parasites causing respiratory tract infections (Ascaries, Pneumocystis carinii, others)</p> <p>➤ <b>Mycology systemic mycosis</b>            Fungal infections of respiratory tract</p>	<p>LGIS            3HR + SGD            2HR</p>	<p>MCQs            SEQs            SAQs            VIVA</p>

3)	Describe the pathogenesis, Brief clinical features, prevention and diagnosis of <u>Tuberculosis</u>	Mycobacterium / A typical Mycobacteria  <b>PRACTICALS (2 HOURS)</b> Ziehl-Neelson Staining technique Tuberculin Test	LGIS 1HR SGD 2HRS	MCQs SEQs SAQs VIVA
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# Pharmacology

## Block – VIII

### Module - IV

Sr.no.	Learning objective by the end of the session, student will be able to	<u>Content area</u>	TEACHING ACTIVITY DURATION	Assessment
1)	Describe the pharmacokinetics of Glucocorticoids.	<ul style="list-style-type: none"> <li>➤ Classification of Glucocorticoids</li> <li>➤ Therapeutic uses of glucocorticoid</li> </ul>	LGIS 02 hour	MCQs SEQs VIVA
2)	Describe pharmacokinetics of Glucocorticoids.	<ul style="list-style-type: none"> <li>➤ Mode of action of different Glucocorticoid</li> <li>➤ Adverse effects of different Glucocorticoid</li> </ul>	LGIS 02 hour	MCQs SEQs VIVA
3)	Describe insulin (different types) in detail.	<ul style="list-style-type: none"> <li>➤ Classify insulin</li> <li>➤ Mode of action of different insulin</li> <li>➤ Adverse effects of different insulin</li> <li>➤ Therapeutic uses of different insulin</li> </ul>	LGIS 02 hour	MCQs SEQs VIVA
4)	Describe pharmacokinetics and pharmacodynamics of Oral hypoglycemic agents.	<ul style="list-style-type: none"> <li>➤ Classify oral hypoglycemia</li> <li>➤ Mode of action of different oral hypoglycemia</li> <li>➤ Adverse effects of different oral hypoglycemia</li> <li>➤ Therapeutic uses of different oral hypoglycemia</li> </ul>	LGIS 02 hour + SGD 02 hour	MCQs SEQs VIVA
5)	Describe pharmacokinetics and pharmacodynamics of Anti thyroid drugs.	<ul style="list-style-type: none"> <li>➤ Classify Anti thyroid drugs</li> <li>➤ Mode of action of different Anti thyroid drugs</li> <li>➤ Therapeutic uses of different Anti thyroid drugs</li> </ul>	LGIS 02 hour	MCQs SEQs VIVA
6)	Describe pharmacokinetics and pharmacodynamics of thyroid drugs	<ul style="list-style-type: none"> <li>➤ Classify thyroid drugs</li> <li>➤ Mode of action of different thyroid drugs</li> <li>➤ Adverse effects of different thyroid drugs</li> <li>➤ Therapeutic uses of different bisphosphonates</li> </ul>	LGIS 02 hour	MCQs SEQs VIVA
7)	Describe in detail drugs of bisphosphonates metabolism.	<ul style="list-style-type: none"> <li>➤ Mode of action of different bisphosphonates</li> <li>➤ Adverse effects of different bisphosphonates</li> <li>➤ Therapeutic uses of different bisphosphonates</li> </ul>	LGIS 02 hour	MCQs SEQs VIVA
8)	Describe in detail calcitonin	<ul style="list-style-type: none"> <li>➤ Mode of action of different calcitonin</li> <li>➤ Adverse effects of different calcitonin</li> <li>➤ Therapeutic uses of different calcitonin</li> </ul>	SGD 02 hour	MCQs SEQs VIVA

9)	Describe in detail Calciminetics.	<ul style="list-style-type: none"> <li>➤ Mode of action of different Calciminetics.</li> <li>➤ Adverse effects of different Calciminetics.</li> <li>➤ Therapeutic uses of different Calciminetics.</li> </ul>	SGD 02 hour	MCQs SEQs VIVA
10)	Describe the drugs acting on obstructive pulmonary disorders.	<ul style="list-style-type: none"> <li>➤ Classify antiasthmatic drugs</li> <li>➤ Mode of action of different antiasthmatic drugs</li> <li>➤ Adverse effects of different antiasthmatic drugs</li> </ul>	LGIS 02 hour + SGD 02 hour	MCQs SEQs VIVA
11)	Describe the drugs acting in respiratory systems.	<ul style="list-style-type: none"> <li>➤ Classify antitussives</li> <li>➤ Mode of action of antitussives</li> <li>➤ Adverse effects of antitussives</li> </ul>	SGD 02 hour	MCQs SEQs VIVA
12)	Describe in detail mucolytic agent.	<ul style="list-style-type: none"> <li>➤ Classify mucolytic agent</li> <li>➤ Mode of action of mucolytics</li> <li>➤ Adverse effects of mucolytic agents</li> </ul>	SGD 02 hour	MCQs SEQs VIVA
13)	Describe in detail histamines.	<ul style="list-style-type: none"> <li>➤ Classification of antiallergic agents</li> <li>➤ Mode of action</li> <li>➤ Therapeutic uses and adverse effects</li> </ul>	SGD 02 hour	MCQs SEQs VIVA
14)	Describe in detail expectorants.	<ul style="list-style-type: none"> <li>➤ Classification of expectorants</li> <li>➤ Mode of action and therapeutic uses</li> <li>➤ Adverse effects of expectorants</li> <li>➤ <b>Practicals:</b></li> <li>➤ Identification of drugs formulations related to endocrinology and respiratory system</li> <li>➤ Mention the group, generic name, brand name and clinical uses of given specimen of drugs</li> <li>➤ Prescription writing of Diabetes militis type I and II, osteoporosis, hypothyroidism and thyrotoxicosis</li> <li>➤ Acute streptococcal pharyngitis and allergic rhinitis</li> <li>➤ Bronchial asthma and pneumonia</li> <li>➤ Clinico pharmacological seminar in rational drugs therapy for treatment of hypothyroidism , treatment of hyperthyroidism, management of osteoporosis, asthma, treatment of pneumonia, management of prophylaxis of tuberculosis</li> <li>➤ Pharmacological treatment of allergic reactions.</li> </ul>	SGD 02 hour	MCQs SEQs VIVA

# Forensic Medicine

Sr.no.	Learning objective by the end of the session, student will be able to	<u>Content area</u> <b>Module 4 Endocrinology and Respiratory</b>	TEACHING ACTIVITY DURATION	Assessment
1.	<b>Traumatology</b> <ul style="list-style-type: none"> <li>• Describe factors, mechanism, types, and characteristics medico legal aspects of blunt force trauma.</li> <li>• Explain the methods and medico legal importance of dating of wound.</li> </ul>	<ul style="list-style-type: none"> <li>➤ Mechanical injuries – general aspects</li> <li>➤ Mechanism of wound production</li> <li>➤ Classification and Medico legal aspects of</li> <li>➤ Abrasion</li> <li>➤ Bruise</li> <li>➤ Laceration</li> </ul>	LGIS 03 hour	MCQs SEQs VIVA OSPE
2.	<b>Sharp force trauma</b> <ul style="list-style-type: none"> <li>➤ Describe factors, mechanism, types, characteristics and medico legal aspects of sharp force trauma.</li> <li>➤ Differentiate suicidal and homicidal cut throat.</li> </ul>	<ul style="list-style-type: none"> <li>➤ Classification and Medico legal aspects of</li> <li>➤ Stab wounds</li> <li>➤ Incised wound</li> </ul>	LGIS 02 hour	MCQs SEQs VIVA OSPE
3.	<b>Self-inflicted / defense wounds</b> <ul style="list-style-type: none"> <li>• Compare and contrast ante mortem from postmortem wounds</li> <li>• Describe pattern of injuries in self-inflicted and defense wounds</li> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>➤ Defense between Ante mortem – postmortem wounds</li> <li>➤ Self – inflicted wounds</li> <li>➤ Defense wound</li> </ul>	LGIS 01 hour	MCQs SEQs SAQs VIVA OSPE
4.	<b>Cause of death from wound</b> <ul style="list-style-type: none"> <li>• Explain the causes of death resulting from wound.</li> </ul>	<ul style="list-style-type: none"> <li>➤ Immediate &amp; remote causes of death</li> </ul>	SGD 2 hours	MCQs SEQs SAQs VIVA
5.	<b>Firearm – general aspects</b> <ul style="list-style-type: none"> <li>• Give classification of firearm</li> <li>• Identify types and parts of cartridges</li> <li>• Discuss different parts of ammunition</li> </ul>	<ul style="list-style-type: none"> <li>• Classification of firearms structure of firearms &amp; cartridges</li> <li>• Operating principles</li> <li>• Terminology and Various phenomenon related to firearm</li> </ul>	LGIS 02 hour	MCQs SEQs SAQs VIVA OSPE

	contributing in formation.			
6.	<b>Firearms injuries</b> <ul style="list-style-type: none"> <li>• Discuss the salient feature of firearm injuries.</li> <li>• Estimate the distance between firearm and body.</li> </ul>	<ul style="list-style-type: none"> <li>➤ Characteristics of rifled firearms injuries at varying range.</li> <li>➤ Characteristics of shot gun injuries at varying range.</li> <li>➤ Difference between entry and exit wound.</li> </ul>	LGIS 02 hour	MCQs SEQs SAQs VIVA OSPE
7.	<b>Firearm injuries</b> <ul style="list-style-type: none"> <li>• Describe the precautions adopted in autopsy process, preservation of bullets in death from firearm.</li> </ul>	<ul style="list-style-type: none"> <li>➤ Postmortem examination in case of firearm related death.</li> </ul>	LGIS 01 hour	MCQs SEQs SAQs VIVA
8.	<b>Explosive injuries</b> <ul style="list-style-type: none"> <li>• Discuss mechanism of blast and injuries pattern.</li> <li>• Discuss cause of death due to to explosive.</li> <li>• Discuss role of forensic expert in explosives injuries.</li> </ul>	<ul style="list-style-type: none"> <li>➤ Mechanism of production of wound in case of explosion</li> <li>➤ Characteristics of explosive injuries</li> <li>➤ Cause of death</li> </ul>	SGD 02 hour	MCQs SEQs SAQs VIVA OSPE



# Block- VIII

## Module –V Cardiovascular and Lymphoid System

### Pathology

Sr.no.	Learning objective by the end of the session, student will be able to	<u>Content area</u> <u>Cardiovascular and Lymphoid System</u>	TEACHING ACTIVITY DURATION	Assessment
1)	<b>Pakistan Penal Code:</b> <ul style="list-style-type: none"> <li>➤ Discuss salient feature of Pakistan Penal Code (Qisas&amp;Diyat)</li> <li>➤ Discuss types of Qatar and their punishment.</li> <li>➤ Interpret the nature of injuries of in the light of Pakistan Penal Code</li> </ul>	<ul style="list-style-type: none"> <li>• Qatar and its types</li> <li>• Punishment given in the law</li> <li>• Hurt and its classification</li> </ul>	LGIS 2HR	MCQs SEQs SAQs VIVA OSPE
2)	<b>Medico legal injury certificate</b> <ul style="list-style-type: none"> <li>➤ Examine an injured person, certify nature, manner, causative agent and dating wound.</li> </ul>	<ul style="list-style-type: none"> <li>• Certification of injuries according to Pakistan Penal Code.</li> </ul>	SGD DHQ Visit 4hour	MCQs SEQs SAQs VIVA OSPE

Sr.no.	Learning objective by the end of the session, student will be able to	<p style="text-align: center;"><b>Content area</b>  <b>Module – 5 Cardiovascular and Lymphoid System</b></p>	TEACHING ACTIVITY DURATION	Assessment
1)	<ul style="list-style-type: none"> <li>➤ Discuss the pathogenesis, causes and clinical features of heart failure.</li> <li>➤ Explain pathogenesis and clinical features of various types of congenital heart diseases.</li> </ul>	<p><b>Cardiovascular System</b></p> <ul style="list-style-type: none"> <li>• Heart failure (Right sided, Left sided)</li> <li>• Congenital heart diseases.</li> </ul>	<p style="text-align: center;">LGIS 02 HRS +SGD 01 HRS</p>	<p style="text-align: center;">MCQs SEQs SAQs VIVA</p>
2)	<ul style="list-style-type: none"> <li>➤ Discuss the etiology, pathogenesis, morphological changes, natural course and risk factors for coronary atherosclerosis.</li> <li>➤ Discuss the risk factors, pathogenesis, clinical presentations and lab diagnosis of ischemic heart disease.</li> </ul>	<ul style="list-style-type: none"> <li>• Atherosclerosis</li> <li>• IHD</li> </ul>	<p style="text-align: center;">LGIS 02 HRS +SGD 2 HRS</p>	<p style="text-align: center;">MCQs SEQs SAQs VIVA</p>
3)	<ul style="list-style-type: none"> <li>➤ Describe hypertension with respect to its etiology, pathogenesis, clinical features and complications.</li> <li>➤ What are valvular heart diseases? Their types along with their clinical features?</li> </ul>	<ul style="list-style-type: none"> <li>• Hypertensive heart diseases</li> <li>• Systemic heart diseases (Left sided)</li> <li>• Pulmonary heart disease (Right sided) COR PULMONALE</li> <li>• Valvular diseases (Stenosis, Regurgitation, Prolapse)</li> </ul>	<p style="text-align: center;">LGIS 03 hour + SGD 2 HRS</p>	<p style="text-align: center;">MCQs SEQs SAQs VIVA</p>
4)	<ul style="list-style-type: none"> <li>➤ Explain Rheumatic fever and Rheumatic heart diseases in terms of their pathogenesis, morphology and clinical features.</li> </ul>	<ul style="list-style-type: none"> <li>• Rheumatic fever</li> <li>• Rheumatic heart diseases</li> </ul>	<p style="text-align: center;">LGIS 02 HRS +SGD 2 HRS</p>	<p style="text-align: center;">MCQs SEQs SAQs VIVA</p>
5)	<ul style="list-style-type: none"> <li>➤ Explain Cardiomyopathies, Its three types along with their etiological factors, and clinical presentation?</li> <li>➤ What do u mean by myocarditis? Explain its morphological and clinical features?</li> </ul>	<ul style="list-style-type: none"> <li>• Cardiomyopathies (Dilated, Hypertensive, Restrictive types)</li> <li>• Myocarditis</li> </ul>	<p style="text-align: center;">LGIS 02 HRS +SGD 1 HRS</p>	<p style="text-align: center;">MCQs SEQs SAQs VIVA</p>
6)	<ul style="list-style-type: none"> <li>➤ Classify aneurysms and describe their etiology and morphology.</li> <li>➤ Describe various types of vasculitis on the</li> </ul>	<ul style="list-style-type: none"> <li>• Aneurysms (True, False)</li> <li>• Vasculitis ( Large, Medium and small vessel)</li> </ul>	<p style="text-align: center;">LGIS 2 HOURS</p>	<p style="text-align: center;">MCQs SEQs SAQs VIVA</p>

	basis of pathogenesis and morphology.			
7)	➤ Classify tumors of blood vessels.	<ul style="list-style-type: none"> <li>• Vascular tumors (Benign, Intermediate behavior, Malignant)</li> <li>• Practical: (4hours)</li> <li>• Myocardial infarction</li> <li>• Vasculitis</li> <li>• Vascular tumors</li> <li>• Aneurysms</li> <li>• Myocarditid</li> <li>• Relevant lab</li> <li>• Investigations</li> </ul>	LGIS 2 HOURS	MCQs SEQs SAQs VIVA

Sr.no.	Learning objective by the end of the session, student will be able to	<u>Content area</u> <b>FOUNDATION II MODULE</b> <u>GENERAL</u> <b>PATHOLOGY AND</b> <u>MICROBIOLOGY</u>	TEACHING ACTIVITY DURATION	Assessment
1)	<b>Cardiovascular system</b> <ul style="list-style-type: none"> <li>➤ Describe the pathogenesis, Brief clinical features, prevention and diagnosis of</li> <li>➤ <b>Bacterial Endocarditis</b></li> <li>➤ <b>Bacteremia and Septicemia</b></li> <li>➤ <b>Toxic shock syndrome</b></li> </ul>	<b>MICROBIOLOGY</b> Viridians streptococci Enterococci Staphylococcus epidermidis  Pseudomonas aeruginosa Staphaureus GNRs Staphylococcus aureus, Streptococci	LGIS 02 hour	MCQs / VIVA
2)	<ul style="list-style-type: none"> <li>➤ Describe the pathogenesis, Brief clinical features, prevention and diagnosis of <b>myocarditis and pericarditis</b></li> </ul>	<b>Myocarditis</b> Coxsackie viruses Cytomegalovirus EB virus, Parvovirus Influenza Virus Trypanosoma Trichinella Spiralis	LGIS 02 hour	MCQs / VIVA

		<b>Pericarditis</b> Coxsackie viruses Echo virus HIV Virus Cytomegalovirus Streptococcus Pneumonia Staph Aureus Mycobacterium Tuberculosis Histoplasma Capsulatum Coccidioides Immitus		
3)	➤ Describe the pathogenesis, Brief clinical features, prevention and diagnosis of HIV	<b>VIROLOGY</b> HIV Virus Infection	LGIS 02 HRS + SGD 2 HRS	MCQs / VIVA
4)	➤ Describe the pathogenesis, Brief clinical features, prevention and diagnosis of DENGUE FEVER ➤ Viral hemorrhagic fevers	<b>Dengue Fever</b> Crimean congo, Ebola, Dengue HF.		
5)	➤ Describe the pathogenesis, Brief clinical features, prevention and diagnosis of malaria Leishmaniasis, Trypanosomiasis.	<b>PARASITOLOGY</b> Malaria Leishmaniasis Trypanosomiasis  <b>PRACTICAL (2 hours)</b> Diagnosis of Malaria Diagnosis of Leishmania Blood Culture	LGIS 02 HRS + SGD 2 HRS	MCQs / VIVA

# Pharmacology

## Block VIII

### Module V

### Cardiovascular and Lymphoid system

Sr.no.	Learning objective by the end of the session, student will be able to	<u>Content area</u>	TEACHING ACTIVITY DURATION	Assessment
15)	Describe in detail Pharmacokinetics of heart failure. Describe the drugs used in treatment of heart failure.	Pharmacology <ul style="list-style-type: none"> <li>• Drugs used in treatment of heart failure.</li> <li>• Mode of action of drugs used in the treatment of heart failure.</li> <li>• Electric and mechanical effects of digoxin.</li> <li>• Adverse effects of digoxin</li> <li>• Misc. positive inotropic drugs used in CCF.</li> <li>• Drugs without positive inotropic activity used in CCF.</li> <li>• Management of heart failure.</li> </ul>	LGIS 02 hour	MCQs / VIVA
16)	Describe the pharmacokinetics of antihypertensive drugs.	<ul style="list-style-type: none"> <li>• Classification</li> <li>• Absorption</li> <li>• Distribution</li> <li>• Excretion of:</li> </ul> Calcium channel blockers Beta blockers ACE Inhibitor Angiotensin receptor blockers <ul style="list-style-type: none"> <li>• Diuretics</li> <li>• Absorption of antihypertensive drugs</li> <li>• Distribution of antihypertensive drugs</li> <li>• Biotransformation of antihypertensive drugs</li> <li>• Excretion of antihypertensive drugs</li> </ul> Classification of antihypertensive drugs	LGIS + SGD 02 hour + 02 hour	MCQs / VIVA
17)	Describe in detail pharmacokinetics of different groups of antihypertensive drugs.	<ul style="list-style-type: none"> <li>➤ Mode of action, Therapeutic uses</li> <li>➤ Adverse effects and drug interactions of:</li> </ul> Calcium channel blockers Beta blockers ACE Inhibitor Angiotensin receptor blockers <ul style="list-style-type: none"> <li>• Diuretics</li> <li>• Mode of action of different groups of antihypertensive drugs</li> <li>• Therapeutic uses of antihypertensive drugs</li> </ul>	LGIS + SGD 02 HRS + 02 HRS	MCQs / VIVA

		<ul style="list-style-type: none"> <li>• Adverse effects of antihypertensive drugs.</li> </ul> <p>Common drug-drug interactions of antihypertensive agents.</p>		
18)	Describe in detail pharmacokinetics and pharmacodynamics of antianginal drugs.	<ul style="list-style-type: none"> <li>➤ Classification of antianginal agents</li> <li>➤ Therapeutic uses of antianginal agents</li> <li>➤ Mode of action of antianginal agents</li> <li>➤ Adverse effects of antianginal agents.</li> </ul>	LGIS + SGD 02 HRS + 02 HRS	MCQs / VIVA
19)	Describe the pharmacokinetics and pharmacodynamics of drugs used in various types of cardiac arrhythmias.	<ul style="list-style-type: none"> <li>➤ Drugs used in various of cardiac arrhythmias</li> <li>➤ Therapeutic uses of different groups of antiarrhythmic drugs</li> <li>➤ Mode of action of different groups of antiarrhythmic drugs</li> <li>➤ Adverse effects of different groups of antiarrhythmic drugs</li> </ul> <p><b>PRACTICAL:</b></p> <ul style="list-style-type: none"> <li>• To study the effects of drugs in frog's heart</li> <li>• To study the effects of drugs on blood vessels of frog</li> <li>• Identification of drugs formulation:</li> </ul> <p>Mention the group, generic name, brand name and clinical uses of given specimen of drug</p> <p><b>Prescription writing for:</b></p> <ul style="list-style-type: none"> <li>• Essential hypertension</li> <li>• Malignant hypertension</li> <li>• Cardiac failure</li> <li>• Angina pectoris</li> <li>• Clinical seminars</li> </ul> <p><b>Clinico-pharmacological seminar in rational drug therapy for:</b></p> <ul style="list-style-type: none"> <li>• Management of hypertension</li> <li>• Pharmacology of angina pectoris</li> <li>• Management of acute and chronic heart failure</li> <li>• Management of cardiac arrhythmia</li> </ul>	LGIS + SGD 02 HRS + 02 HRS	MCQs / VIVA OSPE

# Forensic Medicine

Sr.no.	Learning objective by the end of the session, student will be able to	<u>Content area</u>	TEACHING ACTIVITY DURATION	Assessment
1.	<b>REGIONAL INJURIES</b> <ul style="list-style-type: none"> <li>• Describe the medico legal aspects of regional injuries.</li> <li>• Explain the various types of skull fractures.</li> </ul>	<ul style="list-style-type: none"> <li>➤ Skull fractures.</li> <li>➤ Medico legal aspects of cranial trauma</li> </ul>	LGIS 01 hour	MCQs / VIVA
2.	<b>CRANIAL TRAUMA</b> <ul style="list-style-type: none"> <li>• Explain coup and counter coup injuries with examples.</li> <li>• Describe medico legal importance of intracranial hemorrhages.</li> <li>• Describe concussion.</li> </ul>	<ul style="list-style-type: none"> <li>➤ Coup and counter coup injuries</li> <li>➤ Intracranial hemorrhages.</li> <li>➤ Concussion.</li> </ul>	LGIS 01 hour	MCQs / VIVA
3.	<b>REGIONAL INJURIES</b> <ul style="list-style-type: none"> <li>• Discuss the various injuries of chest, abdomen, bones, and joint of medico legal importance.</li> </ul>	<ul style="list-style-type: none"> <li>➤ Injuries of chest, abdomens, bones and joints</li> </ul>	LGIS 01 hour	MCQs/ OSPE VIVA
4.	<b>TRANSPORTATION INJURIES</b> <ul style="list-style-type: none"> <li>• Describe the mechanism, pattern and medico legal aspect of injuries in pedestrians, vehicle occupants.</li> </ul>	<ul style="list-style-type: none"> <li>➤ Road traffic accidents</li> <li>➤ Injuries in pedestrian's vehicle occupants.</li> </ul>	LGIS 01 hour	MCQs/ OSPE VIVA
5.	<b>TRANSPORTATION INJURIES</b> <ul style="list-style-type: none"> <li>• Describe the mechanism, pattern and medico legal aspects of motors cyclists, and railway and aircraft injuries.</li> </ul>	<b>Injuries pattern and cause of death in</b> <ul style="list-style-type: none"> <li>➤ Motor cyclists</li> <li>➤ Railway</li> <li>➤ Accidents</li> <li>➤ Aircraft crash</li> </ul>	LGIS 01 hour	MCQs / VIVA
6.	<b>Death in custody</b> <ul style="list-style-type: none"> <li>• Describe the methods of police torture</li> <li>• Describe injuries pattern and medico legal aspects of death in custody by police torture.</li> <li>• Describe role of doctor according to world medical association.</li> </ul>	<ul style="list-style-type: none"> <li>➤ Police torture</li> <li>➤ Pattern of injuries</li> <li>➤ Causes of death</li> <li>➤ Relevant laws</li> </ul>	SGD 02 hours	MCQs/ OSPE VIVA

	<ul style="list-style-type: none"> <li>• Law related to torture in Pakistan.</li> </ul>			
7.	<p><b>STARVATION</b></p> <ul style="list-style-type: none"> <li>• Describe Autopsy findings and medico legal significance in starvation.</li> </ul>	<ul style="list-style-type: none"> <li>➤ Clinical features</li> <li>➤ Autopsy findings</li> <li>➤ Medico legal significance</li> </ul>		
8.	<ul style="list-style-type: none"> <li>• Describe the cases of forensic importance seen at medico legal section and mortuary of a hospital (Medico legal cases &amp; Autopsy)</li> </ul>	<ul style="list-style-type: none"> <li>➤ Autopsy reports</li> <li>➤ Injuries reports</li> </ul>	DHQ VISIT (04 HOURS)	



# Pathology

## Block - VIII

### Module – VI Reproductive and Chemotherapy

Sr.no.	Learning objective by the end of the session, student will be able to answer:	Content area Module – VI Reproductive and Chemotherapy	TEACHING ACTIVITY DURATION	Assessment MCQ / SEQ
1.	Describe the etiology, morphology and diagnosis of pathologies of vulva and vagina.	Reproductive System (Female Genital System)  Cysts, Benign, In situ and Malignant lesions of vulva and vagina	LGIS 02 HOUR	MCQs / VIVA
2.	Describe the etiology, pathogenesis, diagnosis and screening measures for carcinoma of cervix.	<ul style="list-style-type: none"> <li>➤ Inflammation (Cervicitis)</li> <li>➤ Endocervical polyps</li> <li>➤ Premalignant (CIN) and malignant neoplasms of cervix (Cervical Carcinoma)</li> </ul>	LGIS 02 HOUR	MCQs / VIVA
3.	Discuss the causes of abnormal uterine bleeding in reference to dysfunctional uterine bleeding.  Discuss the etio-pathogenesis, clinical features and diagnosis morphological changes of endometrial hyperplasia, endometrial polyp.  List the causes and pathogenesis of endometriosis and adenomyosis.	<ul style="list-style-type: none"> <li>➤ Dysfunctional uterine bleeding</li> <li>➤ Endometritis (Acute, Chronic )</li> <li>➤ Endometriosis</li> <li>➤ Adenomyosis</li> <li>➤ Endometrial polyp</li> <li>➤ Endometrial Hyperplasia</li> </ul>	LGIS 02 HOUR + SGD 2 HOUR	MCQs / VIVA
4.	Describe the pathogenesis, risk factors and morphology of tumors of uterus.	<ul style="list-style-type: none"> <li>➤ Endometrial Carcinoma</li> <li>➤ Myometrial tumors (Leiomyoma, leiomyosarcoma)</li> </ul>	LGIS 02 HOUR	MCQs / VIVA
5.	Classify ovarian tumors and describe the morphological changes and clinical features.	<ul style="list-style-type: none"> <li>➤ Surface epithelia, Germ cell and sex cord Stromal tumors of ovary</li> </ul>	LGIS 02 HOUR + SGD 02 HOUR	MCQs / VIVA

6.	<p>Discuss the etiology, pathogenesis and complications of ectopic pregnancy.</p> <p>Describe gestational trophoblastic tumors with reference to cytogenetic and histological analysis.</p> <p>Discuss the causes, pathogenesis and relevant investigations of infertility.</p>	<ul style="list-style-type: none"> <li>• Ectopic pregnancy</li> <li>• Pre-eclampsia and Eclampsia</li> <li>• Trophoblastic tumors (Hydatidiform Mole Complete, partial), Invasive mole, Choriocarcinoma)</li> <li>• Placental site trophoblastic tumors</li> </ul> <p><b>PRACTICALS: 02 HOURS</b></p> <ul style="list-style-type: none"> <li>• Cin/Squamous cell</li> <li>• CA of Cervix</li> <li>• Endometrial Carcinoma</li> <li>• Ovarian tumors</li> </ul>	<p>LGIS 02 HOUR</p>	<p>MCQs / VIVA</p>
7.	<p>Describe the etiology, pathogenesis, morphology, diagnosis and clinical course of prostatitis.</p> <p>Describe the etiology, pathogenesis, morphology, diagnosis and clinical course of benign prostatic hyperplasia.</p> <p>Describe the etiology, pathogenesis, morphology, diagnosis and clinical course of prostatic adenocarcinoma.</p>	<p><b>Male Genital System</b></p> <ul style="list-style-type: none"> <li>• Prostatitis (Acute bacterial prostatitis, Chronic prostatitis, Granulomatous prostatitis)</li> <li>• Glandular hyperplasia of prostate</li> <li>• Adenocarcinoma of prostate</li> </ul>	<p>LGIS 02 HOUR</p>	<p>MCQs / VIVA</p>
8.	<p>Discuss the causes, pathogenesis and clinical features of scrotal swellings.</p> <p>Discuss Testis and epididymis Inflammatory disorders.</p> <p>Describe etiology, morphology and tumor makers of tumors of testes.</p>	<ul style="list-style-type: none"> <li>• Epididymitis</li> <li>• Orchitis (Bacterial, Granulomatous)</li> <li>• Testicular tumors (Germ cell and sex cord stromal tumors)</li> </ul> <p><b>PRACTICALS: 02 HOURS</b></p> <ul style="list-style-type: none"> <li>• Testicular tumors</li> <li>• BPH</li> <li>• CA prostate</li> </ul>	<p>LGIS 02 HOUR + SGD 02 HOUR</p>	<p>MCQs / VIVA</p>
9.	<p>Discuss the etiology, pathogenesis, morphology, clinical features and prognosis of Mastitis.</p> <p>Describe the causes of nipple discharge with special reference to intraductal papilloma.</p>	<p><b>BREAST</b></p> <ul style="list-style-type: none"> <li>• Acute mastitis</li> <li>• Mammary duct ectasia</li> <li>• Fat necrosis</li> <li>• Intraductal Papilloma</li> <li>• Nipple adenoma</li> </ul>	<p>LGIS 02 HOUR + SGD 02 HOUR</p>	<p>MCQs / VIVA</p>
10.	<p>Discuss the etiology, pathogenesis, morphology, clinical feature, risk factors and prognosis of fibroepithelial and stromal lesions of breast.</p>	<ul style="list-style-type: none"> <li>• Fibroadenoma</li> <li>• Fibrocystic disease</li> <li>• Adenosis</li> <li>• Phyllodes tumors</li> </ul>	<p>LGIS 02 HOUR</p>	<p>MCQs / VIVA</p>

11.	<p>Discuss the etiology, pathogenesis, morphology, clinical features, risk factors and prognosis of breast cancer.</p> <p>Discuss the pathogenesis of gynaecomastia.</p>	<ul style="list-style-type: none"> <li>Breast carcinoma (Invasive Ductal Ca and Invasive Lobular Ca with various subtypes)</li> <li>Male breast pathology</li> </ul> <p><b>PRACTICALS:</b></p> <ul style="list-style-type: none"> <li>Fibroadenoma</li> <li>Fibrocystic disease</li> <li>Breast carcinoma</li> </ul>	<p>LGIS 02 HOUR + SGD 02 HOUR</p>	<p>MCQs / VIVA</p>
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## Module VII

Sr.no.	Learning objective by the end of the session, student will be able to	<u>Content area</u> <u>Module VII</u>	TEACHING ACTIVITY DURATION	Assessment
1.	Describe the pathogenesis, Brief clinical features, prevention and diagnosis of Genital ulcer Disease.	<p><b>GENITAL ULCER DISEASE</b>  Hemophilus duceryi, HSV-2  Treponema pallidum, Chlamydia trachomatis L123, Klebsiella granulomatous</p>	<p>LGIS + SGD 02 hour + 02 hour</p>	<p>MCQs / VIVA</p>
2.	Describe the pathogenesis, Brief clinical features, prevention and diagnosis of Genital Tract Infections.	<p><b>VAGINITIS</b>  Vulvovaginal candidiasis, Trichomoniasis, Bacterial vaginosis (Gardnerella vaginalis, anerobes like mobiluncus)</p> <p><b>CERVICITIS</b>  Chlamydia trachomatis D- K, Neisseria gonorrhoeae, HSV, Trichomonas PID  Neisseria gonorrhoeae, Chlamydia trachomatis, Trichomonas</p> <p><b>URETHRITIS</b>  Neisseria gonorrhoeae, Chlamydia trachomatis, Trichomonas</p> <p><b>PROSTATITIS</b>  Enterobacteriaceae (e.g Proteus species, E. coli, Pseudomonas, Chlamydia trachomatis, Neisseria gonorrhoeae.</p> <p><b>VIROLOGY</b>  Genital ulceration Hepatitis B, C and  <b>HIV infections</b></p> <p><b>PARASITOLOGY, MYCOLOGY</b>  Vulvovaginal candidiasis Trichomoniasis</p> <p><b>PRACTICAL (02 hours)</b>  Examination of effusions  MGS  Chancroid (Haemophilus ducreyi)  Lymphogranuloma venereum</p>	<p>LGIS 02 hour</p>	<p>MCQs / VIVA</p>

(Chlamydia trachomatis serovars L1-3-)  
Granuloma inguinale (Klebsiella granulomatis)

# Pharmacology

## Block VIII

### Module VI

### Cardiovascular and Lymphoid system

Sr.no.	Learning objective by the end of the session, student will be able to	<u>Content area</u>	TEACHING ACTIVITY DURATION	Assessment
1.	Describe in detail estrogen.	<ul style="list-style-type: none"> <li>Classify estrogen</li> <li>Mode of action of different estrogen</li> <li>Adverse effects of different estrogen</li> <li>Therapeutic uses of different estrogen</li> </ul>	LGIS 01 hour	MCQs / VIVA
2.	Describe the pharmacology of progestin.	<ul style="list-style-type: none"> <li>Classify progestin</li> <li>Mode of action of different progestin</li> <li>Adverse effects of different progestin</li> <li>Therapeutic uses of different progestin</li> </ul>	SGD 02 hour	MCQs / VIVA
3.	Describe the pharmacology of anabolic steroid.	<ul style="list-style-type: none"> <li>Classify anabolic steroid</li> <li>Mode of action of different anabolic steroid</li> <li>Adverse effects of different anabolic steroid</li> <li>Therapeutic uses of different anabolic steroid</li> </ul>	LGIS 01 hour	MCQs / VIVA
4.	Describe in detail Oral contraceptive pills.	<ul style="list-style-type: none"> <li>Classify Oral contraceptives</li> <li>Mode of action of different Oral contraceptives</li> <li>Adverse effects of different Oral contraceptives</li> <li>Therapeutic uses of different Oral contraceptives</li> </ul>	LGIS 01 hour	MCQs / VIVA
5.	Describe the pharmacology of Oxytocin.	<ul style="list-style-type: none"> <li>Classify Oxytocin</li> <li>Mode of action of different Oxytocin</li> <li>Adverse effects of different Oxytocin</li> <li>Therapeutic uses of different Oxytocin</li> </ul>	LGIS 01 hour	MCQs / VIVA OSPE

6.	Describe the pharmacology of Vasopresin.	<ul style="list-style-type: none"> <li>Classify Vasopresin</li> <li>Mode of action of different Vasopresin</li> <li>Adverse effects of different Vasopresin</li> <li>Therapeutic uses of different Vasopresin</li> </ul>	LGIS 01 hour	MCQs SEQs VIVA
7.	Describe the pharmacokinetics and pharmacodynamics of cell wall inhibitors.	<ul style="list-style-type: none"> <li>Classify penicillin's on the basis of their clinical spectrum.</li> <li>Mode of action of various group of penicillin.</li> <li>Therapeutic uses various group of penicillin.</li> <li>Pharmacological properties of penicillin's.</li> </ul>	LGIS 01 hour	MCQs SEQs VIVA
8.	Describe the pharmacokinetics and pharmacodynamics of cephalosporins.	<ul style="list-style-type: none"> <li>Absorption</li> <li>Distribution</li> <li>Metabolism and excretion of cephalosporins</li> <li>Classification of cephalosporins</li> <li>Mode of action of different groups of all the four generations of cephalosporins</li> <li>Therapeutic uses of all the four generations of cephalosporins</li> <li>Adverse effects of all the four generations of cephalosporins</li> </ul>	LGIS 02 hour	MCQs SEQs VIVA
9.	Describe the pharmacology of carbapenems & monobactams.	<ul style="list-style-type: none"> <li>Adverse effects of carbapenems &amp; monobactams</li> <li>Classification of carbapenems &amp; monobactams</li> <li>Mode of action of carbapenems &amp; monobactams</li> <li>Therapeutic uses of carbapenems &amp; monobactams.</li> </ul>	LGIS 02 hour	MCQs SEQs VIVA
10.	Describe the pharmacology of vancomycin.	<ul style="list-style-type: none"> <li>Mechanism of action clinical uses and adverse effects of vancomycin.</li> </ul>	SGD 2 HOUR	MCQs SEQs VIVA
11.	Describe the pharmacokinetics and pharmacodynamics of tetracyclines.	<ul style="list-style-type: none"> <li>Absorption</li> <li>Distribution</li> <li>Metabolism and excretion of tetracyclines.</li> <li>Classification of tetracyclines</li> <li>Mode of action of tetracyclines</li> <li>Therapeutic uses of tetracyclines</li> <li>Adverse effects of tetracyclines</li> </ul>	SGD 2 HOUR	MCQs SEQs VIVA
12.	Describe the pharmacokinetics and pharmacodynamics of aminoglycosides.	<ul style="list-style-type: none"> <li>Absorption</li> <li>Distribution</li> <li>Metabolism and excretion of aminoglycosides</li> <li>Classification of aminoglycosides</li> <li>Mode of action of different groups of aminoglycosides</li> </ul>	LGIS 3 HOUR	MCQs SEQs VIVA

		<ul style="list-style-type: none"> <li>• Therapeutic uses of aminoglycosides</li> <li>• Adverse effects of aminoglycosides</li> </ul>		
13.	Describe the pharmacokinetics and pharmacodynamics of macrolides.	<ul style="list-style-type: none"> <li>• Absorption</li> <li>• Distribution</li> <li>• Metabolism and excretion of macrolides</li> <li>• Classification of macrolides</li> <li>• Mode of action of different groups of macrolides</li> <li>• Therapeutic uses of macrolides</li> <li>• Adverse effects of macrolides</li> </ul>	LGIS 3 HOUR	MCQs SEQs VIVA
14.	Describe the pharmacokinetics and pharmacodynamics of chloramphenicol.	<ul style="list-style-type: none"> <li>• Pharmacokinetics properties</li> <li>• Mechanism</li> <li>• Clinical uses and adverse effects of chloramphenicol</li> <li>• Absorption</li> <li>• Distribution</li> <li>• Metabolism and excretion of chloramphenicol</li> <li>• Classification of chloramphenicol</li> <li>• Mode of action of different groups of chloramphenicol</li> <li>• Therapeutic uses of chloramphenicol</li> <li>• Adverse effects of chloramphenicol</li> </ul>	LGIS 2 HOUR	MCQs SEQs VIVA
15.	Describe the pharmacokinetics of clindamycin.	<ul style="list-style-type: none"> <li>• Absorption</li> <li>• Distribution</li> <li>• Metabolism and excretion of clindamycin.</li> </ul>	LGIS 2 HOUR	MCQs SEQs VIVA
16.	Describe the pharmacodynamics of clindamycin.	<ul style="list-style-type: none"> <li>• Classification of clindamycin</li> <li>• Mode of action of clindamycin</li> <li>• Therapeutic uses of clindamycin</li> <li>• Adverse effects of clindamycin.</li> </ul>	LGIS 2 HOUR	MCQs SEQs VIVA
17.	Describe the pharmacokinetics and dynamic properties of sulfonamides.	<ul style="list-style-type: none"> <li>• Absorption</li> <li>• Distribution</li> <li>• Metabolism and excretion of sulfonamides.</li> <li>• Classification of sulfonamides.</li> <li>• Mode of action of different groups of sulfonamides.</li> <li>• Therapeutic uses of sulfonamides.</li> <li>• Adverse effects of sulfonamides.</li> </ul>	LGIS 2 HOUR	MCQs SEQs VIVA
18.	Describe the pharmacokinetics and dynamic properties of fluoroquinolones.	<ul style="list-style-type: none"> <li>• Absorption</li> <li>• Distribution</li> <li>• Metabolism and excretion of fluoroquinolones</li> </ul>	LGIS 2 HOUR	MCQs SEQs VIVA

19.	Describe the pharmacodynamics of fluoroquinolones.	<ul style="list-style-type: none"> <li>• Classification of fluoroquinolones</li> <li>• Mode of action of fluoroquinolones</li> <li>• Therapeutic uses of fluoroquinolones</li> <li>• Adverse effects of fluoroquinolones</li> </ul>	LGIS 2 HOUR	MCQs SEQs VIVA
20.	Describe the pharmacokinetics and dynamic of anti-tuberculosis drugs.	<ul style="list-style-type: none"> <li>• First line drug therapy for tuberculosis</li> <li>• Classification of anti T.B drugs</li> <li>• Mode of action of anti tuberculous drugs</li> <li>• Therapeutic uses of anti tuberculous drugs</li> <li>• 2<sup>nd</sup> line drug therapy for tuberculosis</li> </ul>	LGIS 3 HOUR	MCQs SEQs VIVA
21.	Describe the pharmacokinetics and dynamic of drug used to treat leprosy.	<ul style="list-style-type: none"> <li>• Drug used in treatment of leprosy</li> <li>• Classification of drugs used in leprosy</li> <li>• Mode of action of different drugs used in leprosy</li> <li>• Therapeutic uses of drug used in leprosy</li> <li>• Adverse effects of drug used in leprosy</li> </ul>	LGIS 2 HOUR	MCQs SEQs VIVA
22.	Describe the pharmacokinetics and dynamic of antiviral drugs.	<ul style="list-style-type: none"> <li>• Classification of antiviral drugs</li> <li>• Moe of action of antiviral drugs</li> <li>• Therapeutic uses of antiviral drugs</li> <li>• Adverse effects of antiviral drugs</li> </ul>	LGIS 3 HOUR	MCQs SEQs VIVA
23.	Describe the pharmacokinetics and dynamic of anticancer drugs.	<ul style="list-style-type: none"> <li>• Anticancer drugs based on cell cycle specificity</li> <li>• Classification of anticancer drugs</li> <li>• Mode of action of anticancer drugs</li> <li>• Therapeutic uses of anticancer drugs</li> <li>• Adverse effects of anticancer drugs</li> <li>• Mechanism of action and adverse effect of anticancer drugs</li> <li>• Mechanism of resistance to anticancer drugs</li> </ul>	LGIS 3 HOUR	MCQs SEQs VIVA
24.	Describe in detail anti-microbial drugs.	<ul style="list-style-type: none"> <li>• Classify microbial drugs</li> <li>• Mode of action of different microbial drugs</li> <li>• Adverse effects of different microbial drugs</li> <li>• Therapeutic uses of different microbial drugs</li> </ul> <p><b>PRACTICALS:</b></p>	LGIS 2 HOUR	MCQs SEQs VIVA

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|--|--|--|--|--|
|  |  | <ul style="list-style-type: none"><li>• Identification of drugs formulation:</li><li>• Mention the group generic name, brand name, and clinical uses of given specimen of drug</li><li>• Prescription writing for:</li><li>• Upper respiratory functions</li><li>• Oral candidiasis</li><li>• Typhoid fever</li><li>• HIV infection</li><li>• Herpes simplex viral infection</li><li>• Clinico-pharmacological seminar in rational drug therapy for:</li><li>• Management of male and female infertility</li><li>• Uses of contraceptives</li><li>• Treatment of herpes, CMV, Influenza and hepatitis B &amp; C, viral disease, treatment of candidiasis and other bacterial infections.</li></ul> |  |  |
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# Forensic Medicine

Sr.no.	Learning objective by the end of the session, student will be able to	<u>Content area</u> <u>Module VI</u>	TEACHING ACTIVITY DURATION	Assessment
1.	<b>Asphyxia – General Aspects</b> <ul style="list-style-type: none"> <li>• Describe the types and pathophysiology of asphyxia deaths.</li> <li>• Describe pathological signs of asphyxia,</li> <li>• Discuss anoxia and its type.</li> </ul>	<ul style="list-style-type: none"> <li>➤ Types of violent asphyxia deaths</li> <li>➤ Pathophysiology</li> <li>➤ Types of anoxia</li> <li>➤ Pathological signs of asphyxia.</li> </ul>	LGIS 01 hour	MCQs / VIVA OSPE
2.	<b>Hanging</b> <ul style="list-style-type: none"> <li>• Describe the mechanism, causes of death, postmortem appearances, and medico legal significance of hanging.</li> </ul>	<ul style="list-style-type: none"> <li>➤ Types of hanging</li> <li>➤ Cause of death</li> <li>➤ Postmortem finding</li> </ul>	LGIS 01 hour	MCQs / VIVA OSPE
3.	<b>Strangulation</b> <ul style="list-style-type: none"> <li>• Describe the types, causes of death, postmortem appearances, and medico legal significance of strangulation.</li> </ul>	<ul style="list-style-type: none"> <li>➤ Types of strangulation</li> <li>➤ Cause of death</li> <li>➤ Postmortem findings</li> <li>➤ Medico legal significance</li> </ul>	LGIS 02 hour	MCQs/ OSPE VIVA
4.	<b>Violent deaths due to asphyxia</b> <ul style="list-style-type: none"> <li>• Describe the causes of death, postmortem appearances, and medico legal significance of suffocation, gagging, choking and smothering.</li> </ul>	<b>Cause of death, postmortem appearance and medico legal significance in case of:</b> <ul style="list-style-type: none"> <li>• Suffocation</li> <li>• Gagging</li> <li>• Choking</li> <li>• Smothering</li> </ul>	LGIS 01 hour	MCQs/ OSPE VIVA
5.	<b>Violent deaths due to asphyxia</b> <ul style="list-style-type: none"> <li>• Describe the types, causes of death, postmortem appearances and medico legal significance of garroting, bansdola, traumatic asphyxia, café coronary syndrome and auto-erotic asphyxia.</li> </ul>	<ul style="list-style-type: none"> <li>• Types, causes of death, postmortem appearances, and medico legal significance of garroting, bansdola, traumatic, asphyxia, café coronary syndrome and auto-erotic asphyxia.</li> </ul>	SGD 02 hour	MCQs / VIVA OSPE
6.	<b>Drowning</b> <ul style="list-style-type: none"> <li>• Describe the types, causes of death, postmortem</li> </ul>	<ul style="list-style-type: none"> <li>• Types</li> <li>• cause of death</li> <li>• Postmortem appearances</li> <li>• Medico legal significance</li> </ul>	LGIS 02 hour	

	appearances, and medico legal significance of drowning			MCQs/ OSPE VIVA
7.	<b>Asphyxiants</b> <ul style="list-style-type: none"> <li>Discuss the clinical features, diagnosis, management, postmortem appearance and medico legal significance of poisoning by carbon dioxide and hydrogen sulphide.</li> </ul>	<ul style="list-style-type: none"> <li>Sources</li> <li>Clinical features</li> <li>Diagnosis</li> <li>Management</li> <li>Postmortem appearance</li> </ul>	SGD 02 hour	MCQs / VIVA OSPE
8.	<b>Cardiac poison</b> <ul style="list-style-type: none"> <li>Describe the clinical features, diagnosis, treatment, postmortem appearance and medico legal significance of cardiac poison.</li> </ul>	<ul style="list-style-type: none"> <li>Aconite</li> <li>Digitalis</li> <li>Nerium odorum</li> <li>Yellow oleander</li> <li>Cerebra odallam</li> <li>Nicotine</li> </ul>	SGD 02 hour	MCQs/ OSPE VIVA
9.	<ul style="list-style-type: none"> <li>Discuss the legal issues of artificial insemination</li> <li>Describe virginity</li> <li>Differentiate true and false virgin</li> <li>Define and classify various sexual offences</li> <li>Explain punishment of sexual offence according to Holy Quran and Sunnah</li> <li>Discuss the punishments described in Tazir &amp; Hudood Ordinance</li> </ul>	<ul style="list-style-type: none"> <li>Sexual Offences</li> </ul>	SGD 02 hour	MCQs/ OSPE VIVA
10.	<ul style="list-style-type: none"> <li>Describe the examination protocol for the rape victim and the accused (Zinabiljabr)</li> <li>Describe the examination procedure of active and passive agents (Habitual/non habitual) of sodomy</li> <li>Explain the method of collection, preparation of specimens, preparation of slides and swabs in sexual offences of a forensic science laboratory</li> </ul>	<ul style="list-style-type: none"> <li>Rape victim examination</li> </ul>	SGD 02 hour	MCQs / VIVA OSPE

11.	<b>Pregnancy &amp; Delivery</b> <ul style="list-style-type: none"> <li>• Describe the signs of pregnancy</li> <li>• Describe the signs of recent and remote delivery</li> </ul>	<ul style="list-style-type: none"> <li>➤ Medico legal aspects of pregnancy and delivery</li> <li>➤ Postmortem appearances</li> </ul>	LGIS 01 hours	MCQs/ OSPE VIVA
12.	<b>Criminal abortion</b> <ul style="list-style-type: none"> <li>• Describe criminal abortion its methods and complications.</li> <li>• Discuss law related to abortion in Pakistan Penal Code.</li> </ul>	<ul style="list-style-type: none"> <li>➤ Methods</li> <li>➤ Complications</li> <li>➤ Cause of death</li> <li>➤ Postmortem appearances</li> <li>➤ Relevant laws</li> </ul>	LGIS 01 hours	MCQs/ OSPE VIVA
13.	<ul style="list-style-type: none"> <li>• Discuss the cases of forensic importance seen at medico legal section and mortuary of a hospital (Medico legal cases &amp; Autopsies)</li> </ul>	<ul style="list-style-type: none"> <li>➤ Autopsy reports</li> <li>➤ Injury reports</li> </ul>	DHQ VISIT 04 HRS.	MCQs / VIVA OSPE

## **Recommended Books:**

- Current Surgical Diagnosis and Treatment
- Surgery; Principles in General by Shuja Tahir & Abid Bashir
- Hamilton Baily. Demonstration of Physical signs in clinical surgery
- Browse. Introduction to signs and symptoms of surgical diseases
- Clinical skills for undergraduates by Abdul Majeed Ch. And Aamer Zaman Khan

**CLINICAL TRAINING PROGRAM 3<sup>rd</sup> YEAR MBBS**

**(BLOCK VIII)**

**08 WEEKS (02 DAYS A WEEK, WEDNESDAY & THURSDAY)**

Batch		Date	Unit	Time
Batch C Roll # 056-080	C1 056-068	01/05/19 to 31/07/19	Medicine & Allied	1110-1300 hrs.
	C2 069-080			
Batch D Roll # 081-105  (+2015 detainees)	D1 081-097 & D2 098-105 (+ 2015 detainees)	01/05/19 to 31/07/19	Surgery & Allied	1110-1300 hrs.
Batch A Roll # 001-028	A1 001-013	01/05/19 to 31/05/19	ENT	1110-1300 hrs.
	A2 014-028		EYE	
	A1 001-013	01/06/19 to 31/07/19	EYE	
	A2 014-028		ENT	
Batch B Roll # 029-055	B1 029-041	01/05/19 to 31/05/19	Psychiatry	1110-1300 hrs.
	B2 042-055		Gynae	
	B1 029-041	01/06/19 to 31/07/19	Gynae	
Batch B Roll # 029-055	B1 021-041	01/05/19 to 31/05/19	Psychiatry	1110-1300 hrs.
	B2 042-055		Gynae	
	B1 029-041	01/06/19 to 31/07/19	Gynae	
	B2 042-055		Psychiatry	

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