



STUDY GUIDE
4th YEAR MBBS
Y4 – B1

DEPARTMENT OF MEDICAL EDUCATION

CMH KHARIAN MEDICAL COLLEGE



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MISSION

Our mission is to educate and produce exemplary doctors who practice ethical patient centered health care, discover and advance knowledge and are responsive to the community needs.

VISION

To produce competent doctors equipped with sound knowledge based on scientific principles, imbued with ethics and moral values primed to serve the community through the profession.

Our aim is to

- Provide outstanding educational environment for medical students.
- Develop exemplary clinicians who are lifelong learners and provide the highest quality compassionate care and serve the needs of their community and the nation in the best traditions of medical profession.
- Ensure the highest ethical and professional standards in all of our deeds.

Exit Outcomes for the CKMC Graduate

At the end of five years MBBS degree program graduate of CMH Kharian Medical College should be able to:

Knowledge

- Integrate knowledge of basic and clinical sciences in disease prevention and promotion of health and well-being of community.
- Able to appraise varied information they would come across during professional work

and testify innovative ideas to benefit human society through evidence-based health care practice

- Demonstrate scientific knowledge in all professional activities
- Demonstrate research skills which bring innovation and significance to health care practices.

Skills

- Able to perform physical examinations, formulate provisional diagnosis with appropriate investigations to identify specific problems.
- Perform various common procedures to diagnose and manage non critical clinical problems.
- Demonstrate competency in life saving procedures.
- Exhibit propensity of critical thinking, problem solving and lifelong self-directed learning skills.

Attitude

- Manifest ethical values and professionalism.
- Demonstrate professional attitude towards patients, their families, seniors and colleagues.
- Demonstrate dedication and professionalism when faced natural disasters in country.
- Demonstrate communication skills, inter professional skills and leadership.

knowledge	Skill	Attitude
Integrated knowledge of basic & clinical sciences	Communication skills	Ethical values
Patient centered care	Research skills	
Health promotion & disease prevention	Patient management skills	Professionalism
Community needs	Leadership skills	
	Critical thinking skills	

Introduction to the Study Guide

Dear Students,

We, at the Department of Medical Education, CMH Kharian Medical College, have developed this study guide especially for you. This study guide is an aid to

- Inform you how this part of your syllabus has been organized.
- Inform you how your learning programs have been organized in this block.
- Help you organize and manage your studies throughout the block
- Guide you on assessment methods, rules and regulations.
- Communicate information on organization and management of the block. This will help you to contact the right person in case of any difficulty.
- Define the objectives which are expected to be achieved at the end of the block.
- Identify the learning strategies such as lectures, small group discussions, clinical skills, demonstration, tutorial and case-based learning that will be implemented to achieve the block objectives.
- Provide a list of learning resources such as books, and journals for students to consult in order to maximize their learning.

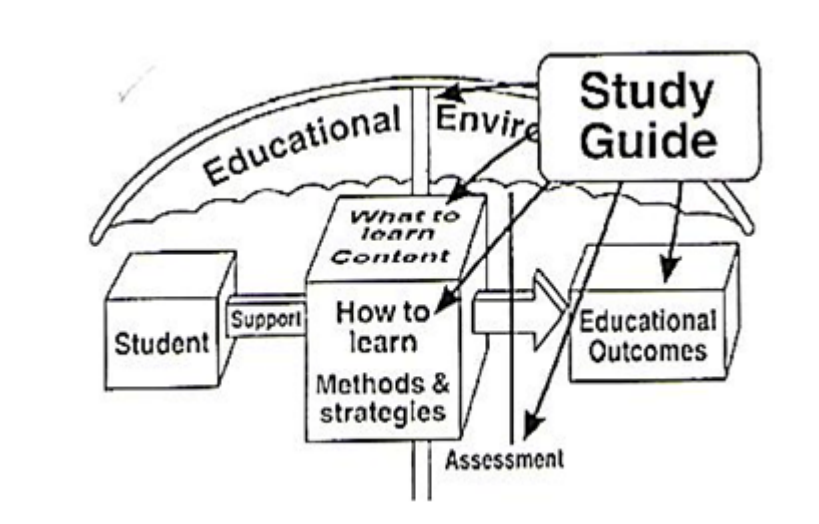


Figure 1 Objectives of study guide by Harden

Curriculum Integration



Medical college curriculum shall be organized in blocks of modules. The modules are named after body system for example a module of blood in a block. The key details are as follows:

1. There shall be three blocks in 4th year MBBS comprising modules.
2. The blocks shall be labeled as 1, 2 and 3.
3. Each module in a block shall have a title. The name of the module shall represent the content taught and learned the majority of time in that module. Module shall be named after body systems.
4. The duration of three blocks shall vary between 10-12 weeks according to syllabus.
5. The syllabus shall be integrated horizontally around systems of the body.
6. There shall be vertical integration to the extent decided by the curriculum coordination committee.
7. Vertical integration shall be in case based learning sessions and in clinical lectures of basic sciences, scheduled in the structured training program.

Teaching and Learning Methods

1: Small Group Discussions (SGD)

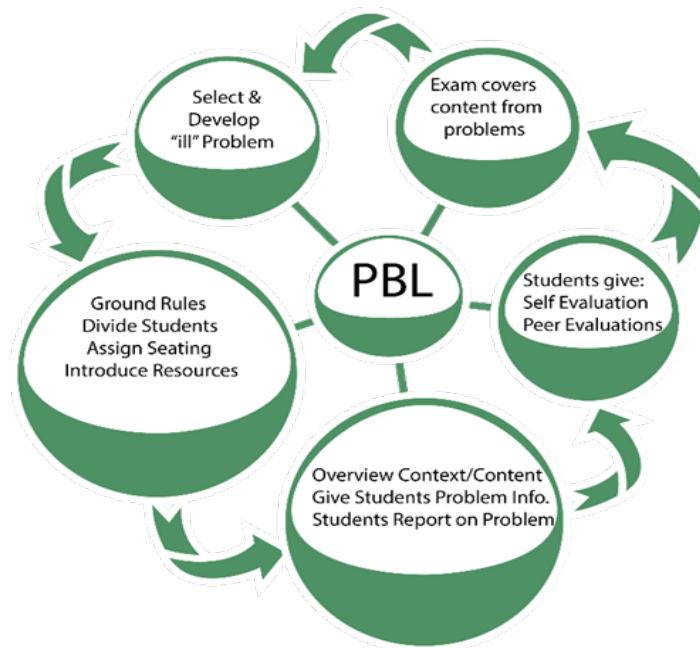


The topic will be taught in groups with the help of models and audiovisual aids. Pre-planned topics would help students to combine their wisdom in achieve learning objectives. Facilitator would be guiding to achieve learning objectives and making them on right track by clarify any misconception.

“Small group learning provides more active learning, better retention, higher satisfaction, and facilitates development of problem-solving and team-working abilities (Jahan, Siddiqui, AlKhour, Ahuja, & AlWard, 2016).

2: Problem Based Learning (PBL)

This is group learning comprising of 8-10 students guided by a facilitator. For a specific problem given to students two sessions of 2 hours would be scheduled to achieve the learning objectives. In the first session students will discuss problem based upon their existing knowledge among the group and will produce a list of their learning objectives for further study. In the second session students share, discuss with each other to build new knowledge.



PBL is a self-directed learning and that type of educational strategy most likely produce doctors who are prepared for lifelong learning and able to meet the changing needs of their patients (Spencer & Jordan, 1999).

3: Large Group Interactive Session (LGIS)



These are meant to give overview of certain course content. They should be interactive so that students can not only gain knowledge but should completely

understand it. Students may clarify the difficult concepts in these sessions. The lecturer introduces a topic and explains the underlying phenomena through questions, pictures, videos of patient's interviews, exercises, etc. Students are actively involved in the learning process.

4: Self Directed Learning (SDL)



In this modern era of medical education, students assume responsibilities of their own learning according to the principles of adult learning. They can study independently, can share and discuss with peers, can take information from the sources of information college have like library, internet and teachers. Students will be provided time within the scheduled college hours for self-study.

5: Hands on Training

- **Lab session**



Practical, being the most basic and effective tool for imparting knowledge, goes hand in

hand with theory for better understanding and concept building. In view of the complexities in the basics and fundamentals of Medical sciences, a good practical demonstration of the underlying concept is a must to simplify the subject. Pharmacology, microbiology and forensic medicine practical will build skills in students of 3rd year and there would be test of these skills in OSPE exam.

- **Clinical Rotations**



The students will rotate in the clinical departments to see integration of knowledge into clinical practices.

Teaching and learning activities are meant to help students to gain new knowledge. It should be kept in mind that they are not meant to fully cover the objectives of the subject. It is therefore responsibility of students to attain more information to cover all objectives given in the overall objectives.

Class attendance and participation is of most important in gaining knowledge. If any help is needed module team can be contacted without any hesitation. Attendance will be strictly checked in different teaching activities. If attendance is **less than 75%**, students would not be allowed to sit for the examination.

Attendance in the examination is must and no students would be allowed to enter the examination area after starting the examination. In case of sickness, sick leaves from government/private hospitals or the emergency of the college hospital will only be entertained.

Assessment Format

Assessment is a goal-oriented process (Angelo, 1995). We assess in order to check whether the learning objectives set at the initiation of the program are met or not and to what extent (Amin, 2007).

No student will be allowed to sit in the annual examination if attendance is below 75% in theory and practical separately.

Assessment types

The assessment will be continuous. The purpose of continuous assessment is formative and summative.

Summative Assessment:

The marks of this type of assessment contribute in the final university result through internal assessment. It comprises:

- CBL/tutorial assessment
- Scheduled tests
- Sub-stages
- End of block exam
- Pre-annual exam

Scheduled tests and sub-stages will be conducted intermittently throughout the block. Their schedule will be intimated through the time tables.

The end of the block exam will be conducted after completion of weeks of instruction. It will comprise one theory paper and one practical exam for Special Pathology, Community Medicine, Eye & Ent. (Table of specifications (TOS) for exam has been provided)

Formative Assessment: Tests may be quizzes, surprise tests/written assignments/self-reflection by students during the teaching time but their marks will not be added to internal evaluation marks. The purpose of formative assessment is to provide feedback to the students, for the purpose of improvement and to teachers to identify areas where students need further guidance.

Internal Assessment

(Will be submitted to the university before professional exam)

- The weightage of internal assessment shall be 10 % in the annual professional examination (or 10 marks for 100 marks in theory and practical each)
- Scheduled tests, sub-stages, CBLs/tutorials, block examinations and pre-annual examinations, conducted by the college shall contribute towards internal assessment for professional examination.

Annual Professional Examination:

- The professional examinations schedule will be provided by NUMS.
- There will be two components of the final result
 - (i) Examination-90 % (ii) Internal Assessment- 10 %
- There will be one theory paper and one Practical exam for Special Pathology, Community Medicine, Eye & Ent each. For practical the class will be divided into batches. Each batch will have practical exam of one subject on the specified day, according to schedule.
- Annual Theory & Practical Examination shall be of 300 marks each in Special Pathology, Community Medicine and 200 marks for Eye & Ent. The pass score shall be 50% in theory and practical separately
- The Annual Theory paper shall be of 135 marks for each Community Medicine and Special Pathology. 15 marks of internal assessment papers, conducted throughout the year will be added to it, to make annual theory assessment of 150 marks.
Similarly, the annual practical examination will be of 135 marks. 15 marks of internal evaluation of practical exams, conducted throughout the year will be added to it, to make annual practical assessment of 150 marks.
- The pass score shall be 75 out of 150, in theory and practical separately.
- The Annual Theory paper shall be of 90 marks for Eye & Ent. 10 marks of internal assessment papers, conducted throughout the year will be added to it, to make annual theory assessment of 100 marks.
Similarly, the annual practical examination will be of 90 marks. 10 marks of internal evaluation of practical exams, conducted throughout the year will be added to it, to make annual practical assessment of 100 marks.
- The pass score for Eye & Ent shall be 50 out of 100, in theory and practical separately.

Schedule of examinations:

a) Continuous assessments schedule

Schedule provided by each department in Time table.

b) Formative tests: Throughout the block

Block Development Committee

Chairperson curriculum committee	Principal Brig (Retd) Shoaib Nayyar Hashmi
Director Medical education	Dr Aasma Qaiser
Block Planner	Dr Aasma Qaiser
Resource Persons	Community Medicine: Dr. Ifat Naiyar S. Pathology: Dr. Urwa Sarwar Eye: Dr Kainat Ent: Dr Jawad Medicine: Brig. Khalid Surgery: Col Nisar
Study Guide Developed By	Department of Medical Education CMH Kharian Medical College Kharian

Structured Summery of Y4B1

Block Code	Y4B1
Pre requisite Block	Clarence of 3 rd professional examination
Duration	12 weeks
Rationale	The Y4B1 block is taught after the students clear their 3 rd professional exam. In a period of 12 weeks, the block aims to form a basis for knowledge and skills related to health and disease status of community, identify ethical issues and malpractices related to health care delivery and health research, knowledge of structure and function of Eye & Ent and diagnosis of diseases in pediatrics.
Community Medicine	Medical Ethics, General epidemiology, Biostatistics, Concept of Health and Disease, Research methodology, Infectious disease epidemiology (General), Screening, Primary Health Care, Leadership, SDGs International health, HMIS
Special Pathology	Cardiovascular system, Respiratory System, Oral cavity and Gastrointestinal tract, Hepatobiliary System and Pancreas
Eye	Eye Lid & adnexa, Conjunctiva, Episclera & sclera, Orbit, Uveitis
Ent	Basic of hearing and balance, Discharge & Deafness, Otagia, Vertigo & Tinnitus, Facial disfigurement
Surgery	Theory: Systemic surgical diseases, Trauma and emergency surgery Neurosurgery, urology, pediatric surgery, anesthesia, plastic and burn, radiology and orthopedics Clinical: C3 level: History taking, patient examination, differential diagnosis, Investigations and management C2 level: complications of treatment
Medicine	Cardiovascular system, Respiratory system, Gastrointestinal Tract, Liver
Gynae & Obs.	Overview & Introduction to basic concepts of Obstetrics/ Gynecology.
Pediatrics	CVS, Respiration, GIT, Dysmorphology



Learning Outcomes

Knowledge

- Identify & prioritize the health problems of community
- Collect, analyze present, interpret data and apply relevant statistical tests to conduct a house hold survey & a mini research project.
- Appraise health promotion, disease prevention and public health as major components of health and evaluate the role of public health in providing individual healthcare.
- Assess health and disease status of the community with the help of indicators in the secondary data and give relevant suggestions
- Identify ethical issues and malpractices related to health care delivery and health research
- Describe the etiology, clinical features, pathogenesis, laboratory findings, morphological features and clinic-pathologic consequences of major diseases related to the cardiovascular system, respiratory system, gastrointestinal

	<p>system, hepatobiliary system and pancreas.</p> <ul style="list-style-type: none"> • Should have the knowledge of normal external ear and differentiate it from abnormal shapes and be able to counsel the parents about its psychological and social impact and suggest timings for correction. • Suggest measures to prevent self - inflicted trauma to avoid external ear diseases and knowledge of inflammatory, traumatic, neoplastic and miscellaneous conditions; management and need for referral to a specialist • Acquire knowledge of innervations of the ear and differentiate between referred otalgia and that arising from local conditions of ear. • A sound knowledge of conditions leading to ear discharge and suggest managements. • Name various types of conditions in the middle ear; be aware about symptoms of chronic discharging ears and any change in symptoms must alert of ensuing complications and take immediate measures to avert life threatening impact and advise relevant investigations and referral for safe care. • Knowledge of the of structures/organs and pathways involved in maintenance of equilibrium and differentiate between light headedness and vertigo of various types on the basis of properly taken structured history; pathophysiology of disorder, its management
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	<p>with proper counseling.</p> <ul style="list-style-type: none"> • Know about tinnitus; its etiology , pathophysiology impact on life and its social aspects and proper counseling. • Knowledge of sound perceiving pathways, classification of deafness, etiology, differentiates between conductive and sensorineural deafness, risk factors, proper screening, prevention and to avoid exposure to conditions causing hearing loss, rehabilitation of hearing impaired. • Be able to differentiate between organic and non-organic hearing loss i.e. hysterical and malingering. Should be able to advise regarding noise induced hearing loss, ototoxicity and presbycusis. Effects of hearing loss on social aspects of life, rehabilitation of deaf and proper counseling. • Knowledge of the nature and components of facial nerve and its innervations. • Identify various nerve lesions topographically in relation to etiology, presentation and early managements to prevent late complications. Differentiate Bell’s palsy from facial paralysis. Advise rehabilitation and proper counseling. •
	<ul style="list-style-type: none"> • Establish diagnosis of given slides of Special Pathology lesions included in the block, correlating histopathological findings. • Able to diagnose a case of Meniere’s disease based on

Skill	<p>proper history and suggest appropriate treatment including rehabilitation after the interpretation of investigations.</p> <ul style="list-style-type: none"> • Diagnose a case of otosclerosis based on history and knowledge of etiology, pathology, presentation, investigations and managements along with counseling. •
Attitude	<ul style="list-style-type: none"> • Demonstrate the effective attitude towards the colleagues • Analyze and address problems collaboratively. • Execute analytic, communicative and collaborative skills along with content knowledge • Demonstrate a professional attitude, team building spirit and good communication skills • Observe lab safety rules

Course content:

4th YEAR MBBS

Block 1 CODE Y4B1

In case of online classes MIT and Assessment will be online via zoom meeting and Google classroom

Course content

Community Medicine Y4B1

Learning outcomes:

After completion of Community Medicine 1st block the students would be able to:

1. Identify & prioritize the health problems of community
2. Collect, analyze present, interpret data and apply relevant statistical tests to conduct a house hold survey & a mini research project.
3. Appraise health promotion, disease prevention and public health as major components of health and evaluate the role of public health in providing individual health care.
4. Assess health and disease status of the community with the help of indicators in the secondary data and give relevant suggestions
5. Identify ethical issues and malpractices related to health care delivery and health research

The following learning objectives, MIT, Assessment strategies will be used to achieve the above outcomes:

S#	Topic	Learning objectives students will be able to		MIT	Names of Instructor	Assessment
		Knowledge	Skill			
1.	Medical Ethics	Relate ethical issues and dilemmas with medical teaching and service delivery in a given scenario	<ul style="list-style-type: none">• Take informed consent from research participants	LGIS		MCQs SAQs, OSCE

2.	General Epidemiology	<ul style="list-style-type: none"> • Define the concepts & aims of Epidemiology and apply them to clinical medicine • Describe and predict disease patterns according to concepts of epidemiological transition and polarization • Calculate and interpret epidemiological rates and ratios formorbidity/ mortality, fertility and migration statistics • Classify the different study designs in epidemiology • Calculate, analyze and interpret their results. • Describe merits & demerits of studies and differentiate them • Identify and differentiate the types of Bias and the techniques for its minimization in different study designs Select appropriate design for studying an association • Analyze a given association for its strength using different study designs 		Flipped class room CBL		MCQs SAQs
3.	Biostatistics	<ul style="list-style-type: none"> • Identify various types of data. • Define, calculate and distinguish measures of central tendency and dispersion. • Identify, interpret and illustrate the normal distribution curve, skewed distribution, bi and poly-modal distribution & Standard Normal Curve • Classify and explain various sampling techniques • Select the relevant sampling technique for a given situation • Differentiate between null and alternate hypothesis, recall steps of its testing and indicate probable errors • Interpret p-value 	<ul style="list-style-type: none"> • Use relevant statistical program and computer for data entry and analysis • Conduct health situation survey/house-hold survey Demonstrate the sampling technique 	Small group discussion CBL		MCQs SAQs, OSCE

4.	Concept of health and disease	<ul style="list-style-type: none"> • Define health and summarize its determinants and indicators. • Choose the most sensitive indicators by citing different examples • Illustrate and describe theories of disease causation • Relate the concept of natural history of disease and iceberg phenomena • Differentiate between disease control, elimination & eradication • Interpret levels of prevention and intervention measures, with applied examples 		Flipped class room Field Visit: Rehabilitation center		MCQs SAQs Report writing
5.	Research methodology	<ul style="list-style-type: none"> • Apply basic biostatistics and epidemiological techniques to research community health projects • Draw conclusions from data • Prepare and present research report • Develop tool for data collection • Apply ethical principles to resolve issues of service delivery in a given research • State a research question Cite references according to Vancouver style 	<ul style="list-style-type: none"> • Formulate a research hypothesis Collect Sample from field • Enter data on SPSS and Excel • Run analysis on SPSS • Search the literature • Estimate the sample size • Conceptualize, plan & present a supervised student research project • Practice ethics in general and specifically in conducting human research including informed consent and basic human right for accepting or declining to participate in research 	LGIS / Practical (Research project)		MCQs SAQs, HHS & Research Project

6.	Infectious disease epidemiology	<ul style="list-style-type: none"> • Interpret various terms used to describe infectious diseases and relate levels of prevention and intervention measures, with applied examples. • Identify and interpret various types of epidemics with focus on disease spread and control • Illustrate graphically and relate the natural history and progression of an epidemic type to stages of prevention • Explain the objectives & logic in steps of investigating an epidemic Assess the level of care at primary, secondary and tertiary levels as applied in real life setting. • Recommend disease control measures • Identify and suggest various methods of sterilization and disinfection in given situations. 		CBL Flipped class room		MCQs SAQs
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7.	Screening	<ul style="list-style-type: none"> • Describe concept and importance of screening • Describe qualities of a good screening test • Select a good screening test in a given situation • Demonstrate relationship between screening and prevalence of disease • Assess usefulness of screening programs before embarking on it • Demonstrate effects of changing sensitivity and specificity on usefulness of screening • Calculate accuracy of a screening test • Identify and correlate favorable characteristics of a disease that make screening useful and relevant for the disease • Identify different misinterpretations/ errors in the screening programmes • Relate ethical concerns in carrying out screening programmes 		CBL Flipped class room		MCQs SAQs
8.	Primary Health Care	<ul style="list-style-type: none"> • Describe the changing concept of health • Categorize health problems based on criteria of susceptibility to control • Explain the concept of 'Health for All,' Principles of Primary Health care and relate its components/ elements • Differentiate between comprehensive and selective PHC • Describe current comprehensive and selective primary healthcare programs • Identify and describe gaps in implementation of PHC 		Flipped class room		MCQs SAQs

9.	Leadership, SDGs And Rural and Urban Health	<ul style="list-style-type: none"> Describe the concept of leadership and identify the role of leadership in PHC Describe the Sustainable Development Goals (SDGs) and relate to national programs and developmental outcomes 		LGIS		MCQs and SAQs
10.	HMIS	<ul style="list-style-type: none"> Identify existing sources of statistical data in Pakistan, Census and its types Interpret different stages of planning such as: situational analysis, establishment of objectives and goals, assessment of resources, fixing priorities, outlining, programming and implementation, monitoring and evaluation Interpret questionnaire for service assessment/ health benefits Summarize the rationale of devolution of power and the problems of health care system in Pakistan <p>Identify current gaps post 18th Amendment and role of tertiary-care facilities in delivering healthcare at all levels</p>		LGIS		SAQs

SPECIAL PATHOLOGY

Y4B1

By the end of Block the students will be able to:

S#	Theme	Learning Outcomes	Course Content	% Wei gh ta ge	Teaching Methodolo gy	Assess ment Metho dology
1	Cardio vascular system	Correlate the morphology & pathogenesis of cardiac and blood vessel diseases with their etiology & complications	<ul style="list-style-type: none"> • Atherosclerosis • Hypertensive Vascular Disease • Aneurysm • Vasculitis • Ischemic Heart Disease • Cardiac Failure • Hypertensive Heart Disease • Rheumatic Fever And Rheumatic Diseases • Heart Diseases • Congenital Heart Disease • Cardio myopathies • Pericardial Diseases • Tumors of CVS 	35%	LGIS	MCQs & SEQs/SAQs
		Justify the importance of various biochemical markers in diagnosis of cardiovascular disorders	<ul style="list-style-type: none"> • Cardiac markers/enzymes • Lipid & Lipoproteins 		SGD	MCQs
2	Respiratory System	Correlate the morphology & pathogenesis of respiratory disorders with their etiology & complications	<ul style="list-style-type: none"> • ARDS • COPD • Asthma & Bronchiectasis • Interstitial Lung Diseases • Pulmonary Vascular Disorders • Pneumonias • Granulomatous Diseases • Lung Cancer • Pleural Effusion & Pneumothorax 	30%	LGIS	SEQs
		Justify the importance of various biochemical markers in diagnosis of metabolic and endocrine disorders	Acid base disorders		SGD	MCQs

3	Oral cavity and Gastrointestinal tract	Analyze the Non neoplastic and neoplastic lesions of salivary glands & oral cavity based on their etiology and pathogenesis, morphology & complications	<ul style="list-style-type: none"> • Inflammatory, neoplastic and non- neoplastic lesions of salivary glands • Tumor and Precancerous conditions of Oral cavity 	35%	LGIS	MCQs & SE Qs /S A Qs
		Correlate the morphology (Microscopic and macroscopic) of gastrointestinal disorders* to their etiology and pathogenesis *Esophagus, Stomach, Small intestine and large intestine	<ul style="list-style-type: none"> • Motor disorders of esophagus, varices, esophagitis & Barrett's esophagus • Tumors of Esophagus • Gastritis & Peptic ulcer Disease • Tumors of Stomach • Malabsorption & celiac disease • Inflammatory Bowel Disease • Enterocolitis • Acute appendicitis • Malignant lesions of small & large intestine 		LGIS	MCQs & SE Qs /S A Qs
	Hepatobiliary system and Pancreas	Correlate the morphology (Microscopic and macroscopic) of Hepatobiliary and pancreatic disorders to their etiology and pathogenesis	Hepatobiliary tract <ul style="list-style-type: none"> • Cirrhosis • Acute & Chronic hepatitis • Drug induced & toxic liver injury • Metabolic liver disease • Cholestatic diseases • Tumors of Liver • Gall bladder diseases 		LGIS/SGD	MCQs & SE Qs /S A Qs
			Pancreas <ul style="list-style-type: none"> • Congenital anomalies • Pancreatitis • Neoplastic disorders of exocrine function of pancreas 		LGIS/SGD	MCQs & SE Qs /S A Qs
		Justify the importance of various biochemical markers in diagnosis of hepatic and pancreatic disorders	<ul style="list-style-type: none"> • Liver function tests • Diagnosis of acute and chronic Hepatitis • Diagnosis of Acute Pancreatitis 		SGD	MCQs
	Total			100		

	End Block Assessment	End Block Assessment to be taken by concerned institute itself Assessment tools: MCQs & SAQs/SEQs		
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PATHOLOGY - Practical			
LEARNING OUTCOMES	List of Practicals	Teaching Methodology	Assessment Methodology
Establish diagnosis by correlating findings of given slides with given scenarios	Atherosclerosis	Practical	OSPE
	Rheumatic carditis and Myocardial infarction		
	Pulmonary tuberculosis and Bronchiectasis		
	Lobar Pneumonia and Broncho Pneumonia		
	Chronic Bronchitis and Bronchogenic carcinoma		
	Chronic gastritis, Peptic ulcer		
	Carcinoma stomach, Ulcerative colitis, Crohn's disease, TB intestines		
	Cirrhosis, CA liver, Chronic Viral Hepatitis, Ch. Cholecystitis		
	Rectal Polyps and Colorectal carcinoma		
	Acute appendicitis, Typhoid ,Malabsorption		

ENT Y4B1

Learning outcomes:

After completion of ENT course content for 1st block the students would be able to:

1. Should have the knowledge of normal external ear and differentiate it from abnormal shapes and be able to counsel the parents about its psychological and social impact and suggest timings for correction.
2. Suggest measures to prevent self - inflicted trauma to avoid external ear diseases and knowledge of inflammatory, traumatic, neoplastic and miscellaneous conditions ; management and need for referral to a specialist
3. Acquire knowledge of innervations of the ear and differentiate between referred otalgia and that arising from local conditions of ear.
4. A sound knowledge of conditions leading to ear discharge and suggest managements. Name various types of conditions in the middle ear; be aware about symptoms of chronic discharging ears and any change in symptoms must alert of ensuing complications and take immediate measures to avert life threatening impact and advise relevant investigations and referral for safe care.
5. Knowledge of the structures/organs and pathways involved in maintenance of equilibrium and differentiate between light headedness and vertigo of various types on the basis of properly taken structured history; pathophysiology of disorder, its management with proper counseling.
6. Know about tinnitus; its etiology, pathophysiology impact on life and its social aspects and proper counseling.
7. Able to diagnose a case of Meniere's disease based on proper history and suggest appropriate treatment including rehabilitation after the interpretation of investigations.
8. Diagnose a case of otosclerosis based on history and knowledge of etiology, pathology, presentation, investigations and managements along with counseling.
9. Knowledge of sound perceiving pathways, classification of deafness, etiology, differentiate between conductive and sensorineural deafness, risk factors, proper screening, prevention and to avoid exposure to conditions causing hearing loss, rehabilitation of hearing impaired. Be able to differentiate between organic and non-organic hearing loss i.e. hysterical and malingering. Should be able to advise regarding noise induced hearing loss, ototoxicity and presbycusis. Effects of hearing loss on social aspects of life, rehabilitation of deaf and proper counseling.
10. Knowledge of the nature and components of facial nerve and its innervations. Identify various nerve lesions topographically in relation to etiology, presentation and early managements to prevent late complications. Differentiate Bell's palsy from facial paralysis. Advise rehabilitation and proper counseling.

S.No	Topic	Learning objectives At the end of the session, students will be able to	MIT	Names of Instructor	Assessment
1.	Congenital diseases of ear	Identify congenital diseases of the ear with reference to their origin and presentation	LGIS	All instructors	MCQ/ SEQ
2.	Diseases of external ear	Diagnose and describe a management plan for diseases of external ear	LGIS	All instructors	MCQ/ SEQ
3.	Diseases of middle ear	Diagnose and describe a management plan for diseases of external ear	LGIS	All instructors	MCQ/ SEQ
4.	Chronic supportive otitis media	Describe clinical signs and symptoms of chronic suppurative otitis media	LGIS	All instructors	MCQ/ SEQ
5.	Complications of chronic supportive otitis media x2	A sound knowledge of conditions leading to ear discharge and suggest managements. Name various types of conditions in the middle ear; be aware about symptoms of chronic discharging ears and any change in symptoms must alert of ensuing complications and take immediate measures to avert life threatening impact and advise relevant investigations and referral for safe care.	LGIS	All instructors	MCQ/ SEQ
6.	Otosclerosis	Diagnose a case of otosclerosis based on history and knowledge of etiology, pathology, presentation, investigations and managements along with counseling.	LGIS	All instructors	MCQ/ SEQ
7.	Meniere's disease Tinnitus & vertigo Deafness	<ul style="list-style-type: none"> Differentiate between various types of vertigo in relation to its pathophysiology Suggest appropriate treatment including rehabilitation after the interpretation of investigations if needed. 	LGIS	All instructors	MCQ/ SEQ
8.	Tinnitus	Diagnose a case presenting with tinnitus on the basis of signs, symptoms and appropriate investigations Suggest thorough management plan	LGIS	All instructors	MCQ/ SEQ
9.	Facial paralysis	Knowledge of the nature and components of facial nerve and its innervations. Identify various nerve lesions topographically in relation to etiology, presentation and early managements to prevent late complications. Differentiate Bell's palsy from facial paralysis. Advise rehabilitation and proper counseling.	LGIS	All instructors	MCQ/ SEQ

Ophthalmology Y4B1

S.No	Topic	Learning objectives At the end of the session students will be able to	Mode of transfer	Names of Instructor	Assessment
1.	Introduction and Dry EYE	<ul style="list-style-type: none"> Explain the medicine and surgery of the eye and its surrounding structures and connections to the brain. Define learning objectives and outcomes in ophthalmology. 	Interactive lecture		MCQ/ SEQ
2.	Eye Lid I	<ul style="list-style-type: none"> Explain the anatomy of Lids. Explanation of function of Lids. Explain the clinical features of eye lid diseases. 	Interactive lecture		MCQ/ SEQ
3.	Eye Lid II	<ul style="list-style-type: none"> Different disorders of Lid. Tumors of Lid. Different investigations of Lid diseases. Knowledge of initial management of different Lid disorders. 	Interactive lecture		MCQ/ SEQ
4.	Lacrimal system	<ul style="list-style-type: none"> Production of tears. Tumors of lacrimal system. Diseases of lacrimal drainage system. Clinical assessment and referral to Ophthalmology. 	Interactive lecture		MCQ/ SEQ
5.	Conjunctiva I	<ul style="list-style-type: none"> Know the applied anatomy, histology and physiology. Identify the clinical sign and symptoms of conjunctival diseases. 	Interactive lecture		MCQ/ SEQ
6.	Conjunctiva II	<ul style="list-style-type: none"> Differentiate between various types of conjunctivitis. Enumerate their treatment steps. Recognize condition like pterygium, pinguecula. 	Interactive lecture		MCQ/ SEQ
7.	Episclera & Sclera	<ul style="list-style-type: none"> Identify episcleritis and scleritis. Recognize the systemic association Identify eye red causing common conditions for their initial management. 	Interactive lecture		MCQ/ SEQ

8.	Orbit I	<ul style="list-style-type: none"> Recall and explain anatomy of Orbit. Know symptoms of Orbit disease and their differential diagnosis. Recognize proptosis and its common causes. Understand different clinical pictures in thyroid Ophthalmopathy. 	Interactive lecture		MCQ/ SEQ
9.	Orbit II	<ul style="list-style-type: none"> Know the investigations required for orbital diseases. Understand various treatment options for orbital diseases and their management. 	Interactive lecture		MCQ/ SEQ
10.	Uveitis	<ul style="list-style-type: none"> Recall and explain the anatomy of uveal tract. Describe basic physiological aspects. Know congenital defects of uveal tract. Know classification of uveitis. Explain the clinical features, investigation and treatment of various uveitis. Know certain special uveitis cases like fuchs uveitis, sympathetic ophthalmia. 	Interactive lecture		MCQ/ SEQ

Pediatrics Y4B1

S.No	TOPIC	LEARNING OBJECTIVES	MIT	Names of instructor	Assessment
		At the end of the session Students will be able to:			
	(A) CVS				
1.	Child with Cyanosis	<ul style="list-style-type: none"> Define cyanosis Describe the basics of cyanosis List Differential Diagnosis of cyanosis in a child Differentiate between central and peripheral cyanosis Discuss key areas in history and examination relevant to children presenting with cyanosis List investigations and outline management plan of cyanosis 	Lecture		MCQ,SEQ

2.	Child with Murmur & Cyanosis	<ul style="list-style-type: none"> • Define murmur • List common congenital heart defects causing cyanosis & murmur. • Describe the evaluation through history, physical examination and investigations • Explain the management options for different cyanotic heart diseases and their prognosis • Discuss pathophysiology, clinical manifestations and complications of Eisenmenger's syndrome 	Lecture		MCQ,SEQ
3.	Child with Murmur & no Cyanosis	<ul style="list-style-type: none"> • List common congenital heart defects producing murmur without cyanosis. • Describe the clinical features of left to right shunts causing volume overload • Recognize clinical features of common lesions causing pressure overload • Discuss difference between small and large left to right shunts • Outline investigations, enumerate management steps and prognosis 	Lecture		MCQ,SEQ
4.	Infective Endocarditis / Rheumatic Heart Disease	<ul style="list-style-type: none"> • Describe etiology of infective endocarditis & Rheumatic heart disease. • Recognize clinical features of infective endocarditis & Rheumatic heart disease. • List investigations and outline management plan. • Discuss prognosis of IE & Rheumatic heart disease. • List common valvular lesions associated with rheumatic heart disease 	Lecture		MCQ,SEQ

5.	Approach to child with collapse and shock	<ul style="list-style-type: none"> List diseases causing collapse and shock in child. Correlate pathophysiology of pediatric CCF to its clinical presentation. Describe signs & symptoms of Myocarditis / Pericarditis/ SVT / long QT syndrome. List investigations and outline management plan of Myocarditis / Pericarditis/ SVT / long QT syndrome . Discuss prognosis 	Lecture		MCQ, SEQ
(B) RESPIRATION					
1.	Child with breathing difficulty	<ul style="list-style-type: none"> List differential diagnosis of child with breathing difficulty Describe the pathophysiology of pneumonia & bronchiolitis Identify signs & symptoms of pneumonia & Bronchiolitis List causative organisms and complications of pneumonia & Bronchiolitis. List investigations and enumerate management steps of pneumonia & Bronchiolitis Interpret radiological findings of pneumonia & bronchiolitis. Interpret laboratory investigations done in a child with respiratory problem List preventive measure of pneumonia Discuss prognosis 	Lecture		MCQ,SEQ

2.	Child with wheezing	<ul style="list-style-type: none"> • List differential diagnosis of child with wheezing • Describe the pathophysiology of asthma • Identify signs & symptoms of acute and chronic asthma • List complications of asthma. • List investigations and enumerate management steps of asthma • Interpret radiological findings and investigations of asthma. • List preventive measure of asthma • Discuss prognosis 	Lecture		MCQ,SEQ
3.	Child with Stridor	<ul style="list-style-type: none"> • List differential diagnosis of child with stridor • Describe the pathophysiology of Croup, Ac. Tracheitis, FB, Epiglottitis, Diphtheria • Identify signs & symptoms of diseases causing stridor • List complications of diseases causing stridor. • List investigations and enumerate management steps of diseases causing stridor. • Interpret radiological findings and investigations of diseases causing stridor. • List preventive measure of diseases causing stridor • Discuss prognosis 	Lecture		MCQ,SEQ
4.	Chronic cough / Recurrent chestinfections	<ul style="list-style-type: none"> • List differential diagnosis of child with Chronic cough / Recurrent chest infections • Describe the pathophysiology of TB, CF, Immotile cilia syndrome Bronchiectasis, Pertussis. • Identify signs & symptoms of diseases causing chronic cough / Recurrent chest infections • List complications of diseases causing chronic cough / Recurrent chest infections. 	Lecture		MCQ,SEQ

		<ul style="list-style-type: none"> List investigations and enumerate management steps of diseases causing chronic cough / recurrent chest infections. Interpret radiological findings and investigations of diseases causing Chronic cough / Recurrent chest infections. List preventive measure of diseases causing Chronic cough / Recurrent chest infections. Discuss prognosis. 			
GIT					
1.	Diarrhea	<ul style="list-style-type: none"> Define Acute / Chronic & Persistent diarrhea. List organisms causing diarrhea. Classify dehydration Identify signs & symptoms of dehydration. Plan management of diarrhoea according to WHO guidelines. 	Lecture		MCQ,SEQ
		<ul style="list-style-type: none"> Discuss clinical features of Hemolytic uremic syndrome. List investigations of diarrhoea/HUS. Outline management plan of HUS. Discuss prognosis. 			
2.	Malabsorption Syndromes	<ul style="list-style-type: none"> Identify the clinical presentation of malabsorption. Identify the signs and symptoms of gluten enteropathy/ celiac disease. List investigations and outline management steps of celiac disease/giardiasis. List complications of malabsorption. Discuss prognosis. 	Lecture		MCQ,SEQ
3.	Jaundice	<ul style="list-style-type: none"> Identify signs and symptoms of Hepatitis and Hepatic encephalopathy. Describe etiology of acute & chronic Hepatitis. 	Lecture		MCQ,SEQ

		<ul style="list-style-type: none"> • Discuss features of hepatotropic viruses. • List complications of Hepatitis & outline management. • List investigations and outline management steps of acute/chronic hepatitis. • Identify clinical features, list investigations and outline management steps of Wilson disease. • Discuss prognosis. 			
4.	Abdominal pain	<ul style="list-style-type: none"> • Describe pathophysiology of abdominal pain, vomiting and constipation. • List causes of abdominal pain, vomiting and constipation in neonates, infants and children. • Discuss the organic causes of constipation. • List investigations and outline management of a child with abdominal pain, vomiting and constipation. 	Lecture		MCQ, SEQ
	INFECTIOUS DISEASES				
.	EPI disease (Measles, Diphtheria Pertussis, Tetanus, Rota virus)	<ul style="list-style-type: none"> • List diseases included in EPI. • Describe Clinical features, list investigations and complications of infectious diseases. • Outline treatment of infectious diseases. • Explain preventive measures. 	Lecture		MCQ, SEQ
2.	Non-EPI disease (Typhoid, Malaria, Dengue)	<ul style="list-style-type: none"> • Describe Clinical features, list investigations and complications of infectious diseases. • Outline treatment of infectious diseases. • Explain preventive measures. 	Lecture		MCQ, SEQ
	MISC				

1	Dysmorphology	<ul style="list-style-type: none"> Describes clinical features and list investigations of common syndromes. Outline management of common syndromes 	Lecture		MCQ,SEQ
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Gynecology/ Obstetrics Y4B1

S. No	Topics	Learning Objective At the end of lecture 4th year students will be able to	MIT	Name of instructor	Mode of assessment
1	Introduction to obstetrics & Gynecology:	<ul style="list-style-type: none"> Describe the topics taught in obstetrics & gynecology Discuss the importance of subject Define common terms used in obstetrics Discuss Obstetric statistics of Pakistan , Maternal mortality rate & its causes Define common terms used in gynecology 	LGIS		
2	Conception implantation and early development of fetus. Placental development and its abnormalities:	<ul style="list-style-type: none"> Discuss how conception and implantation occurs Describe the early development of fetus Explain development of placenta Discuss different abnormalities in placental development 	LGIS		MCQ
3	Hypertensive disorders of pregnancy: Pregnancy induced hypertension(PIH) & Pre-eclampsia (PE):	<ul style="list-style-type: none"> Define hypertension in pregnancy List & define types of hypertensive disorders in pregnancy Describe etiology of pre- eclampsia Discuss pathophysiology of pre- eclampsia Explain clinical presentation of PIH&PE Describe & interpret investigations to diagnose PE Discuss management plan for PIH &PE 	LGIS		MCQ SEQ

4	Hypertensive disorders of pregnancy: Eclampsia & HELLP syndrome	<ul style="list-style-type: none"> • Define Eclampsia & HELLP syndrome • Describe risk factors & pathophysiology of eclampsia & HELLP syndrome • Discuss clinical presentation of eclampsia & HELLP syndrome • Interpret investigation for eclampsia & HELLP syndrome • Formulate a management plan for eclampsia & HELLP syndrome 	LGIS		MCQ SEQ
5	Normal fetal development and growth:	<ul style="list-style-type: none"> • Discuss development of cardiovascular system and fetal circulation & abnormalities • Describe development of lungs & respiratory system & abnormalities • Explain development of gastrointestinal system & its common abnormalities • Describe development of excretory system and its common abnormalities • Discuss development of skin, endocrine system and its common abnormalities • Describe development of blood & immune system & its common abnormalities 	LGIS		MCQ
6	Intrauterine growth restriction (IUGR):	<ul style="list-style-type: none"> • Define IUGR & SGA • Describe etiology of IUGR • Discuss pathophysiology & clinical presentation of IUGR • Interpret investigations done for diagnosis of IUGR • Formulate a management plan for IUGR 	LGIS		MCQ SEQ
7	Physiological changes in pregnancy & Diagnosis of pregnancy:	<ul style="list-style-type: none"> • Describe signs & symptoms of pregnancy and diagnostic tests of pregnancy • Discuss the changes in plasma volume & blood in pregnancy & their importance • Explain the changes in respiratory system & cardiovascular system in pregnancy and their importance 	LGIS		MCQ

		<ul style="list-style-type: none"> • Discuss changes in gastrointestinal system & excretory system in pregnancy and their importance • Describe changes in endocrinological system & metabolism and their importance • Review changes in reproductive system in pregnancy 			
8	Cardiac diseases in pregnancy:	<ul style="list-style-type: none"> • Discuss Pre-pregnancy counseling of patients with heart diseases • Describe antenatal management of patients with cardiac disease in pregnancy • Discuss high risk cardiac conditions & NHYA classification of cardiac patients • Discuss a general management plan of labour & delivery of cardiac patients • Discuss management of heart failure and specific conditions i.e. IHD, Mitral & aortic stenosis, Marfan syndrome & pulmonary hypertension 	LGIS		MCQ SEQ
9	Pre-Pregnancy counselling & complications of Substance abuse in pregnancy:	<ul style="list-style-type: none"> • Discuss importance of pre-pregnancy care • Describe general pre-pregnancy care • Discuss care of patients with specific medical disorders • Explain effects of smoking, alcoholism, opiates & cocaine derivatives on fetus • Discuss management of women with substance abuse 	LGIS		MCQ SEQ
10	Antenatal care:	<ul style="list-style-type: none"> • Discuss the aims & importance of antenatal care • Describe the antenatal booking visit, Booking history & examination • Discuss investigations done at booking visit & their importance 	LGIS		SEQ

		<ul style="list-style-type: none"> Explain follow up visits & routine antenatal care in pregnancy 			
11	Pre-natal diagnosis :	<ul style="list-style-type: none"> Enlist conditions that can be diagnosed in pre-natal period Describe methods for pre-natal diagnosis Discuss pretest counseling before invasive testing Describe indications ,contraindications and complications of chorionic villus sampling, amniocentesis and cordocentesis Discuss down syndromes creening 	LGIS		MCQ SEQ
12	Antenatal imaging & assessment of fetal wellbeing:	<ul style="list-style-type: none"> Discuss the clinical application of ultrasound in pregnancy Describe the scanning schedule in pregnancy Discuss ultrasound assessment of fetal wellbeing Discuss biophysical profile and its importance Explain the Doppler investigations done to assess fetal wellbeing 	LGIS		MCQ SEQ
13	Minor problems of pregnancy and urinary tract infection in pregnancy:	<ul style="list-style-type: none"> Describe musculoskeletal problems i.e. backache, symphysis pubis dysfunction & carpal tunnel syndrome and their management Discuss common gastrointestinal problem hyperemesis gravidarum, gastro esophageal reflux & haemorrhoids and their management Describe etiology and management of varicose veins and edema in pregnancy Explain frequency, etiology ,causative organisms, investigations and management of urinary tract infections in pregnancy 	LGIS		MCQ

14	Labor: Physiology of labor, Diagnosis of labor and Stages of labor:	<ul style="list-style-type: none"> • Discuss changes in uterus, cervix and hormonal factors that occurs during labor • Describe diagnosis of labor • Explain cervical changes during first stage of labor • Explain phases of second stage of labor • Discuss third stage of labor 	LGIS		MCQ
15	Labor: Maternal pelvis, Fetal skull and mechanism of delivery:	<ul style="list-style-type: none"> • Describe the diameters of normal gynaecoidpelvis • Review the abnormalities of pelvic shapes and associated complications • Discuss the anatomy and diameters of fetal skull • Discuss the mechanism of normal delivery 	LGIS		MCQ
16	Management of normal labor ,Partogram:	<ul style="list-style-type: none"> • Discuss on admission history taking, general physical examination, abdominal examination and vaginal examination • Explain partogram and its importance • Describe management of first stage of labor • Describe management of second stage of labor • Describe management of third stage of labor 	LGIS		MCQ SEQ
17	Intrapartum fetal monitoring:	<ul style="list-style-type: none"> • Explain the methods used for intrapartum fetal monitoring • Discuss importance of clear liquor, meconium staining and blood staining of liquor • Describe intermittent auscultation of fetal heart using fetoscope and hand held Doppler • Discuss continuous electronic fetal heart monitoring using CTG and its abnormalities • Describe fetal scalp blood sampling 	LGIS		MCQ
18	Analgesia and anesthesia in labor:	<ul style="list-style-type: none"> • Enlist methods for pain relief during labor • Describe various non- 	LGIS		MCQ SEQ

		<p>pharmacological methods used for labor analgesia</p> <ul style="list-style-type: none"> • Discuss various pharmacological methods for labor analgesia, their effectiveness and side-effects • Explain spinal anesthesia pre-requisites ,method and complications 			
19	Puerperium& its complications:	<ul style="list-style-type: none"> • Discuss physiological changes during normal puerperium • Describe common problems & their management during puerperium • Discuss puerperal pyrexia ,its causes and management • Explain puerperal sepsis, its etiology, clinical presentation and management 	LGIS		MCQ SEQ
20	Viral hepatitis & other liver disorders in pregnancy ,obstetric cholestasis ,Cholelithiasis in pregnancy	<ul style="list-style-type: none"> • Discuss viral hepatitis , its effects on pregnancy , risk of perinatal transmission and management during pregnancy • Describe obstetric cholestasis, its etiology, fetal risks and management of pregnancy • Discuss management of women with cholelithiasis during pregnancy 	LGIS		MCQ SEQ

Medicine Y4B1

S#	Topic	Learning Objective At the end of lecture 4 th year students will be able to	MIT	Names of Instructor	Assessment
	CVS:				
1.	Hypertension		LGIS		MCQ/SAQ
2.	Congestive cardiac failure		LGIS		MCQ/SAQ

3.	Approach to patient with chest pain	<ul style="list-style-type: none"> i. Establish a differential diagnosis for chest pain ii. Know what clues to obtain on history to rule-in or out MI, PE, pneumothorax and aortic dissection iii. Identify risk factors for MI iv. Know how to do a focused physical exam, identifying features that would distinguish between MI, PE, pneumothorax and aortic dissection. v. Identify investigations required in diagnosing MI 	LGIS		MCQ/SAQ
4.	Ischaemic Heart Disease- Angina Pectoris		LGIS		MCQ/SAQ
5.	Unstable angina		LGIS		MCQ/SAQ
6.	Acute Rheumatic Fever & Acute Pericarditis	<ul style="list-style-type: none"> i. Describe its Etiology ii. Discuss pathophysiology related to clinical presentation iii. Identify its Clinical presentation iv. Formulate its Investigation plan v. Plan its management 	LGIS		MCQ/SAQ
Respiration:					
7.	Approach to patient with dyspnea	<ul style="list-style-type: none"> i. Discuss briefly the pathophysiology of dyspnea ii. Enumerate its causes iii. Take history& demonstrate physical signs present in a patient of dyspnea iv. Enlist and justify the differential diagnosis v. Plan relevant investigations vi. Give detailed management plan 	LGIS		MCQ/SAQ

8.	Bronchial Asthma	<ul style="list-style-type: none"> i. Define bronchial asthma ii. Classify it iii. Enumerate its precipitating factors iv. Understand its etiology & pathogenesis v. Identify its clinical features & grade of severity vi. Advice appropriate investigations vii. Discuss its management plan viii. Identify patients with acute severe asthma & manage them ix. Know about brittle asthma 	LGIS		MCQ/SAQ
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9.	Pneumothorax	<ul style="list-style-type: none"> i. Define & classify pneumothorax ii. Explain about its pathological types iii. Describe its clinical features iv. Advice appropriate investigations v. Discuss the treatment plan of these patients vi. Identify recurrent pneumothorax & its management 	LGIS		MCQ/SAQ
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10.	Acute Bacterial Pneumonia	<ul style="list-style-type: none"> i. Define Pneumonia ii. Classify Pneumonias iii. Learn about Community-acquired pneumonia(CAP) iv. Enumerate Common organisms and clinical features of community-acquired pneumonia(CAP) v. Enumerate Factors that predispose to pneumonia vi. Know the clinical signs of Consolidation vii. Understand the objectives of Investigations and enlist them including Microbiological investigations in patients with CAP viii. Enlist Differential diagnosis of pneumonia ix. Know about CURB-65 scoring system and its application in assessment of disease severity x. Learn about management plan of CAP in detail xi. Know the importance of Vaccines, discharge criteria and follow up policy in patients with CAP 	LGIS		MCQ/SAQ
11.	Pleural Effusion	<ul style="list-style-type: none"> i. Define pleural effusion ii. Know briefly its pathophysiology iii. Know its etiology iv. Differentiate between exudative & transudative effusion clinically & on basis of investigations v. Identify its clinical features vi. Advice appropriate investigations vi. Make an appropriate management plan according to the etiology 	LGIS		MCQ/SAQ

12.	Emphysema	<ul style="list-style-type: none"> i. Define COPD and know the epidemiology and Aetiology ii. Have a clear concept of Pathophysiology of COPD iii. Enumerate the risk factors of COPD iv. Learn clinical features and detailed clinical signs of COPD and Emphysema v. Learn about Spirometric classification of COPD severity based on post-bronchodilator FEV vi. Learn about detail management including acute exacerbations of COPD 	LGIS		MCQ/SAQ
	<u>G.1:</u>				
13.	Dyspepsia	<ul style="list-style-type: none"> i. Define Dyspepsia ii. Enumerate causes & types of Dyspepsia iii. Identify Red flag symptoms & signs iv. Outline management of Dyspepsia 	LGIS		MCQ/SAQ
14.	Peptic Ulcer Disease	<ul style="list-style-type: none"> i. Define peptic ulcer ii. Compare duodenal and peptic ulcer iii. Describe its etiology iv. Describe its Clinical presentation v. Plan its management vi. Enumerate its Complications 	LGIS		MCQ/SAQ
15.	Upper GI Bleeding	<ul style="list-style-type: none"> i. Define upper GI Bleed ii. Describe etiology of upper GI Bleed iii. Identify its clinical features iv. Plan evaluation of case of GI Bleed v. Discuss relevant investigations vi. Discuss management 	LGIS		MCQ/SAQ
16.	Acute Diarrheas	<ul style="list-style-type: none"> i. Define acute diarrhea ii. Describe its Pathophysiology iii. Identify its Clinical 	LGIS		MCQ/SAQ

		iv. presentation v. Plan Investigation Discuss detailed management plan			
	Liver:				
17.	Jaundice	i. Understand Pathophysiology of Jaundice ii. Describe causes of Jaundice iii. Plan investigations of a case of Jaundice iv. Give a plan of management of jaundice	LGIS		MCQ/SAQ
18.	Acute Venial Hepatitis (AVH)	i. List the etiology of AVH ii. Explain its epidemiology iii. Describe briefly its clinical features iv. Plan relevant investigations v. Differentiate clinically between different varieties of AVH vi. Predict the course of illness & its prognosis vii. Plan its management & advice about its prevention	LGIS		MCQ/SAQ
19.	Cirrhosis + Ascites	i. Define cirrhosis ii. Enlist its etiology iii. Describe briefly its pathogenesis & pathology iv. Outline its clinical features v. Formulate & interpret its investigations vi. Identify its complication vii. Summarize its treatment plan viii. Describe its course + prognosis ix. Outline the pathogenesis of ascites x. Recognize the clinical feature of ascites xi. Plan relevant investigations of ascites xii. Explain the management of ascites	LGIS		MCQ/SAQ

20.	Cirrhosis - Hepatic Encephalopathy	i. Describe the Pathophysiology of Cirrhosis Hepatic encephalopathy ii. Identify clinical feature of hepatic encephalopathy iii. Enlist precipitating causes of encephalopathy iv. Plan relevant investigations v. Explain Management plan	LGIS		MCQ/SAQ
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Surgery Y4B1

S.No	Topic	Learning objectives At the end of Block 1 students will be able to	Mode of transfer	Names of Instructor	Assessment
1.	Ortho History, Clinical Examination & Investigation	<ul style="list-style-type: none"> Identify anatomical features of bones and joints of upper and lower limbs State the general principles of fracture management. Classify different types of fractures. State radiological principles in fracture diagnosis. List complications from fractures. Describe the basic surgical management of fractures, including femoral neck fractures. 	LGIS		MCQ/ SAQ
2.	Oesophagus motility disorders	<ul style="list-style-type: none"> Relate abnormalities of anatomy and physiology of esophagus to etiology and types of motility disorders generate differential diagnosis of motility disorders based on signs and symptoms. Propose diagnostic and management plan of patient using conventional and newer treatment modalities 	LGIS		MCQ/ SAQ

3.	General Principles of orthopaedic trauma management	<ul style="list-style-type: none"> • Elaborate principles of management through open and closed reduction including follow up plan • List potential complications associated with supracondylar fracture 	LGIS		MCQ/ SAQ
4.	Arterial disorders	<ul style="list-style-type: none"> • Identify clinical manifestations and etiology of acute limb ischemia • Relate the major risk factors to the etiology and pathophysiology of acute limb ischemia. • Elaborate differential diagnosis of acute limb ischemia. • Suggest appropriate investigations to make the diagnosis. • Discuss the medical and surgical management of acute limb ischemia. • Plan appropriate nursing care for the patient of acute limb ischemia. • Elaborate significance of Baseline glycemic control required for surgical procedure • Discuss the complications of Diabetes Mellitus in Surgical Patient • Identify the Signs and Symptoms of uncontrolled DM inpatients • Develop pre-op, and post-op management plan for a diabetic patient. 	LGIS		MCQ/ SAQ
5.	Upper Limbs fractures and dislocations	<ul style="list-style-type: none"> • Identify anatomical features of bones and joints of upper limbs • State the general principles of fracture management. • Classify different types of fractures. • State radiological principles in fracture diagnosis. • List complications from fractures. • Describe the basic surgical management of fractures of upper Limb. 	LGIS		MCQ/ SAQ

6.	Venous disorders	<ul style="list-style-type: none"> • Elaborate clinical presentation, etiology and pathophysiology of varicose veins. • Suggest differential diagnosis based on assessment of patient. • Classify varicose veins. • Rule out the diagnosis of DVT using appropriate investigations. • Suggest conservative or surgical management of varicose veins where indicated. 	LGIS		MCQ/ SAQ
7.	Lower Limbs fractures and dislocations	<ul style="list-style-type: none"> • Identify anatomical features of bones and joints of lower limbs • State the general principles of fracture management. • Classify different types of fractures. • State radiological principles in fracture diagnosis. • List complications from fractures. <p>Describe the basic surgical management of fractures, including femoral neck fractures.</p>	LGIS		MCQ/ SAQ
8.	Cardiac surgery	<ul style="list-style-type: none"> • Relate anatomical anomalies to surgical • correction and its clinical restoration of functional capacity • List complications of untreated anomaly and complications associated with surgery 	LGIS		MCQ/ SAQ
9.	Spine fracture and dislocations	<ul style="list-style-type: none"> • Relate functional anatomy to mechanisms for pain production. • Differentiate between different types of low back pain based on signs and symptoms • Develop management plan for a patient with a Lower back pain. • Justify physical therapy as management option. 	LGIS		MCQ/ SAQ
10.	Lymphatic disorders	<ul style="list-style-type: none"> • Describe the pathogenesis and natural history of disease. • Select appropriate diagnostic tools to interpret their results • Identify the patient problems using appropriate clinical examination and radiological studies. 	LGIS		MCQ/ SAQ

		<ul style="list-style-type: none"> • Apply evidence based decision making for the management of the patient. • Manage patient with lymphatic obstruction. 			
11.	Appendicitis	<ul style="list-style-type: none"> • Describe the symptoms, signs, and differential diagnosis for patients presenting with an acute appendicitis. • Discuss the investigations and management of patients with acute appendicitis. 	LGIS		MCQ/ SAQ
12.	Gall stone disease	<ul style="list-style-type: none"> • Discuss the Etiology of Cholelithiasis with relevance to anatomical and pathological basis • Explains the Clinical presentation of Cholelithiasis • Elaborate the clinical significance of Charcot triangle • Diagnose cholelithiasis based on clinical presentation and investigations • Manage cholelithiasis and its complications 	LGIS		MCQ/ SAQ
13.	Chest trauma I	<ul style="list-style-type: none"> • Differentiate between different types of chest injuries based on mechanism of pathophysiology findings, and management. 	LGIS		MCQ/ SAQ
14.	Chest trauma II	<ul style="list-style-type: none"> • differentiate between types of para pneumonic abscess on the basis of etiology. • Generate differential diagnosis of empyemathoracic • Explains the role of radiographic, endoscopic and laboratory evaluation in the diagnosis • Devise a proper management plan including pharmacotherapy and need for surgical intervention • Discuss the complications of disease and of surgical procedures for empyemathoracic • Propose postoperative follow up plan for the patient 	LGIS		MCQ/ SAQ

15.	Lung and mediastinal tumours	<ul style="list-style-type: none"> • identify the causes and risk factors for lung cancer • Advocate measures and guidelines to decrease risk for developing lung cancer and its screening • Discuss the prognostic factors of Lung. • Classify tumors based on types, staging and grading • justify the role of radiographic, endoscopic and laboratory evaluation in the diagnosis • Formulate a management plan using various modalities. • Discuss the complications of disease and its treatment • Generate differential diagnosis of mediastinal mass based on signs and symptoms <p>Devise a management plan for the treatment and diagnosis of mediastinal mass.</p>	LGIS		MCQ/ SAQ
16.	Diaphragmatic injuries	Differentiate between different types of chest injuries based on mechanism of pathophysiology findings, and management	LGIS		MCQ/ SAQ
17.	Paralytic disorders (Polio, cerebral palsy, spina bifida)	<ul style="list-style-type: none"> • Differentiate between various types of spinal tumors. • Assess the patient clinically for accurate treatment and about Post-surgical complications. 	LGIS		MCQ/ SAQ
18.	Pancreatitis I	<ul style="list-style-type: none"> • Diagnose pancreatitis using Ranson and Glasgow criteria • Enumerate causes of pancreatitis and its predisposing factors • Elaborate the Diagnosis of pancreatitis based on its signs and symptoms • Manage pancreatitis and its complications 	LGIS		MCQ/ SAQ
19.	Obstructive jaundice	<ul style="list-style-type: none"> • provide physiological and anatomical basis of different types of jaundice • Diagnose obstructive jaundice on the basis of clinical presentation and diagnostic tests <p>Plan management of obstructive</p>	CBL		MCQ/ SAQ

		jaundice and its complications			
20.	Pancreatic tumours	<ul style="list-style-type: none"> • Discuss the etiology of Ca Pancreas • Discuss the Clinical Presentation of CaPancreas • Enumerate the signs and symptoms of Capancreas • Discuss diagnostic criteria for Carcinoma Pancreas • stage the cancer Plan the treatment of carcinoma Pancreas and its complications	CBL		MCQ/ SAQ



- Robbins Basic Pathology, 10th ed.& Robbins and Cotran Pathologic Basis of Disease, 9th Edition.
- Robbins Atlas of Pathology 3rd edition & Robbins Basic Pathology 10th edition.
- Diseases of Ear,Nose, and Throat Head and Neck Surgery by PL Dhingra . Shruti Dhingra 6th Edition.
- Logan Turner’s Diseases of the nose Throat and Ear head and Neck Surgery by S. Musheer Hussain 11th Edition
- Clinical ophthalmology, a systematic approach by Jack J. Kanski, 8th Edition.
- General ophthalmology by Vaughan & Asbury, 18th edition.
- Clinical ophthalmology by Shafi M. Jatoi, 5th Edition.

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