

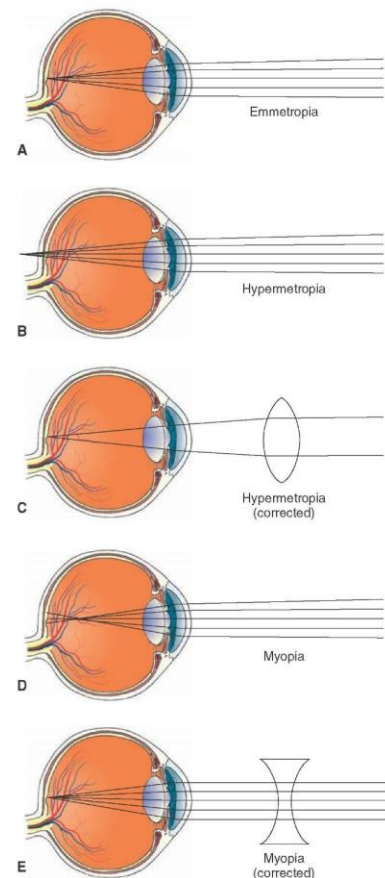
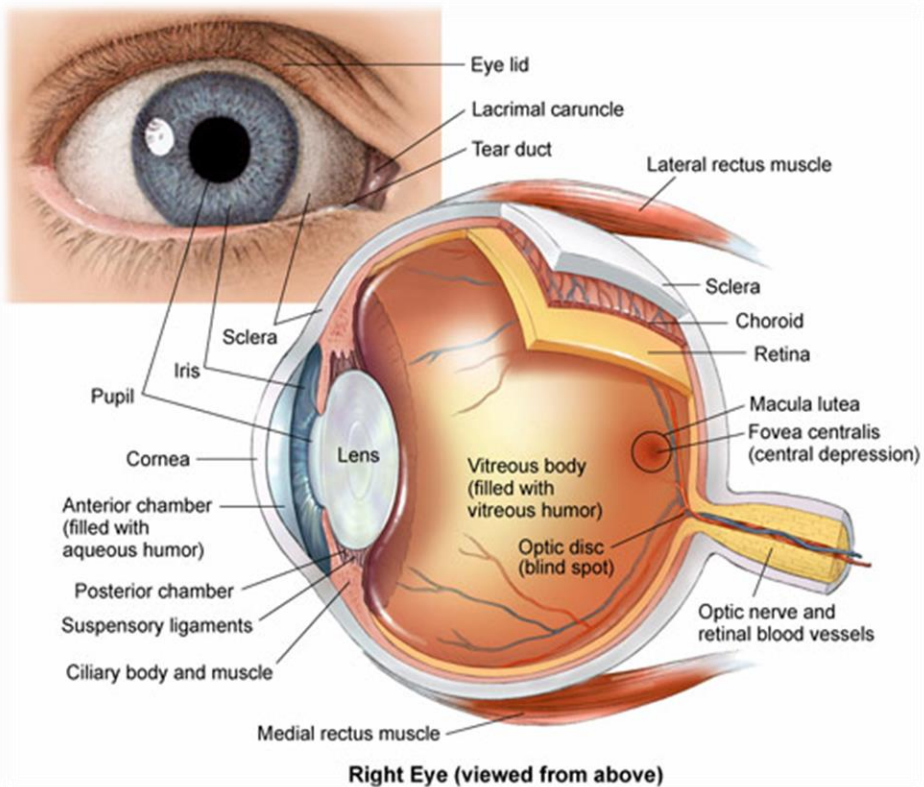
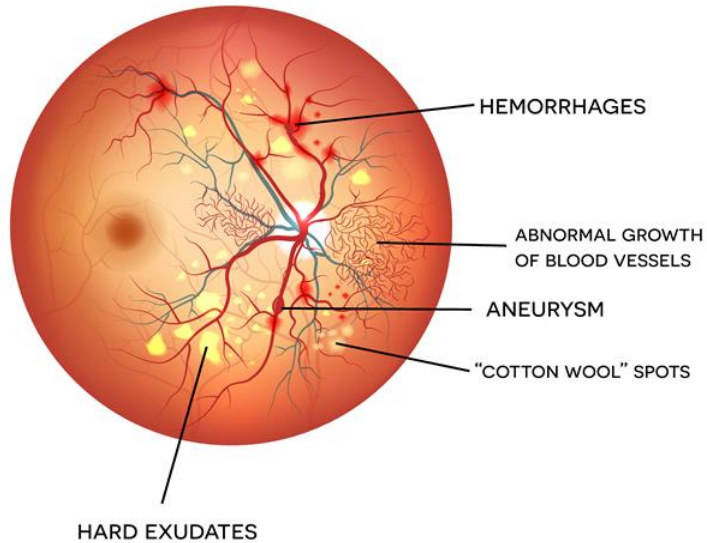
# DIABETIC RETINOPATHY

# STUDY GUIDE

## OPHTHALMOLOGY MODULE

## FOURTH YEAR MBBS SEMESTER 8

23<sup>rd</sup> April – 12<sup>th</sup> May 2018  
Duration: 3 weeks



LIAQUAT NATIONAL HOSPITAL  
& MEDICAL COLLEGE



**STUDY GUIDE FOR OPHTHALMOLOGY MODULE**

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Module name: **Ophthalmology**

Semester: **Eight**

Year: **Four**

Duration: **3 weeks (April – May 2018)**

Timetable hours: **Lectures, Case-Based Discussion (CBD), Clinical Rotations, Task Oriented Learning, Task Presentation, Demonstrations, Skills, Self-Study**

#### MODULE INTEGRATED COMMITTEE

<b>MODULE COORDINATOR:</b>	Dr. Abdul Hameed Siddiqui (Assistant Professor Eye)
<b>CO-COORDINATORS:</b>	Dr. Sobia Ali (Assistant Professor DHCE)

#### DEPARTMENTS' & RESOURCE PERSONS' FACILITATING LEARNING

BASIC HEALTH SCIENCES	CLINICAL AND ANCILLARY DEPARTMENTS
<p><b>ANATOMY</b></p> <ul style="list-style-type: none"> <li>• Professor Zia-ul-Islam</li> <li>• Professor Masood Ahmed</li> </ul>	<p><b>OPHTHALMOLOGY</b></p> <ul style="list-style-type: none"> <li>• Prof. Imran Ghayoor</li> <li>• Dr. Munira Shakir</li> <li>• Dr. Abdul Hameed Siddiqui</li> <li>• Dr. Azam Ali</li> <li>• Dr. Ata-Ur-Rehman</li> <li>• Dr. Muhammad Khalid Bamba</li> </ul>
<p><b>PATHOLOGY</b></p> <ul style="list-style-type: none"> <li>• Professor Naveen Faridi</li> </ul>	<p><b>RESEARCH &amp; SKILLS DEVELOPMENT CENTER</b></p> <ul style="list-style-type: none"> <li>• Dr Kahkashan Tahir</li> </ul>
<p><b>PHYSIOLOGY</b></p> <ul style="list-style-type: none"> <li>• Professor Syed Hafeez-ul-Hassan</li> </ul>	
<p><b>DEPARTMENT of HEALTHCARE EDUCATION</b></p>	
<ul style="list-style-type: none"> <li>• Professor Nighat Huda</li> <li>• Dr. Mirza Aroosa Beg</li> <li>• Dr. Sobia Ali</li> <li>• Dr. Afifa Tabassum</li> <li>• Dr. M. Suleman Sadiq</li> <li>• Dr. Mehnaz Umair</li> </ul>	
<p><b>LNH&amp;MC MANAGEMENT</b></p>	
<ul style="list-style-type: none"> <li>• Professor Amir Ali Shoro, Dean &amp; Principal, Director FHS LNH&amp;MC</li> <li>• Dr. Shaheena Akbani, Controller A.A &amp; R.T LNH&amp;MC</li> </ul>	
<p><b>STUDY GUIDE COMPILED BY:</b></p> <ul style="list-style-type: none"> <li>• Dr. Sobia Ali, Assistant Professor, Department of Health Care Education</li> <li>• Dr. Muhammad Suleman Sadiq, Lecturer III, Department of Health Care Education</li> </ul>	

## **INTRODUCTION**

### **WHAT IS A STUDY GUIDE?**

It is an aid to:

- Inform students how student learning program of the semester-wise module has been organized
- Help students organize and manage their studies throughout the module
- Guide students on assessment methods, rules and regulations

### **THE STUDY GUIDE:**

- Communicates information on organization and management of the module.  
This will help the student to contact the right person in case of any difficulty.
- Defines the objectives which are expected to be achieved at the end of the module.
- Identifies the learning strategies such as lectures, small group teachings, clinical skills, demonstration, tutorial and case based learning that will be implemented to achieve the module objectives.
- Provides a list of learning resources such as books, computer assisted learning programs, web- links, journals, for students to consult in order to maximize their learning.
- Highlights information on the contribution of continuous and semester examinations on the student's overall performance.
- Includes information on the assessment methods that will be held to determine every student's achievement of objectives.
- Focuses on information pertaining to examination policy, rules and regulations.

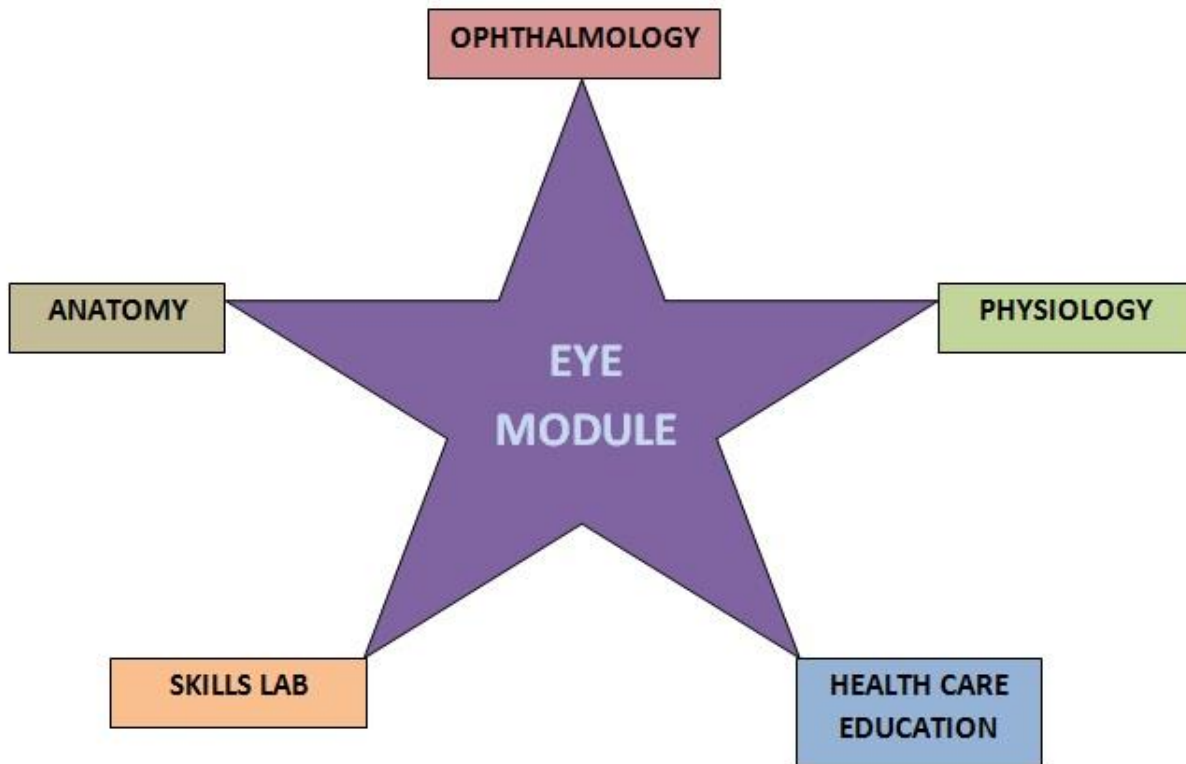
### **CURRICULUM FRAMEWORK**

Students will experience *integrated curriculum* similar to previous modules of all 6 semesters. In 7<sup>th</sup> semester 49 students of group A and B will experience ENT and 48 of Group C and D will experience Eye. Similarly in 8<sup>th</sup> Semester the groups will reciprocate i.e the later 48 students will experience ENT and 49 will experience Eye.

**INTEGRATED CURRICULUM** comprises system-based modules such as Eye/ENT, Orthopedics and Reproductive System-II which links basic science knowledge to clinical problems. Integrated teaching means that subjects are presented as a meaningful whole. Students will be able to have better understanding of basic sciences when they repeatedly learn in relation to clinical examples.

**LEARNING EXPERIENCES:** Case based integrated discussions, Task oriented learning followed by task presentation, skills acquisition in skills lab, computer-based assignments, learning experiences in clinics, wards.

## INTEGRATING DISCIPLINES OF OPHTHALMOLOGY (EYE) MODULE



### LEARNING METHODOLOGIES

The following teaching / learning methods are used to promote better understanding:

- Interactive Lectures
- Small Group Discussion
- Case- Based Discussion (CBD)
- Clinical Experiences
  - Clinical Rotations
- Skills session
- Task-Oriented Learning
  - Task Presentation

**INTERACTIVE LECTURES:** In large group, the lecturer introduces a topic or common clinical conditions and explains the underlying phenomena through questions, pictures, videos of patients' interviews, exercises, etc. Students are actively involved in the learning process.

**SMALL GROUP SESSION:** This format helps students to clarify concepts, acquire skills or desired attitudes. Sessions are structured with the help of specific exercises such as patient case, interviews or discussion topics. Students exchange opinions and apply knowledge gained from lectures, tutorials and self study. The facilitator role is to ask probing questions, summarize, or rephrase to help clarify concepts.

**CASE-BASED DISCUSSION (CBD):** A small group discussion format where learning is focused around a series of questions based on a clinical scenario. Students' discuss and answer the questions applying relevant knowledge gained previously in clinical and basic health sciences during the module and construct new knowledge. The CBD will be provided by the concern department.

**CLINICAL LEARNING EXPERIENCES:** In small groups, students observe patients with signs and symptoms in hospital wards, clinics and outreach centers. This helps students to relate knowledge of basic and clinical sciences of the module and prepare for future practice.

- **CLINICAL ROTATIONS:** In small groups, students rotate in different wards like Medicine, Pediatrics, Surgery, Obs & Gyne, ENT, Eye, Family Medicine clinics, outreach centers & Community Medicine experiences. Here students observe patients, take histories and perform supervised clinical examinations in outpatient and inpatient settings. They also get an opportunity to observe medical personnel working as a team. These rotations help students relate basic medical and clinical knowledge in diverse clinical areas.

**SKILLS SESSION:** Skills relevant to respective module are observed and practiced where applicable in skills laboratory.

**SELF-DIRECTED STUDY:** Students' assume responsibilities of their own learning through individual study, sharing and discussing with peers, seeking information from Learning Resource Center, teachers and resource persons within and outside the college. Students can utilize the time within the college scheduled hours of self-study.

**TASK ORIENTED LEARNING:****What is Task Oriented Learning (TOL)?**

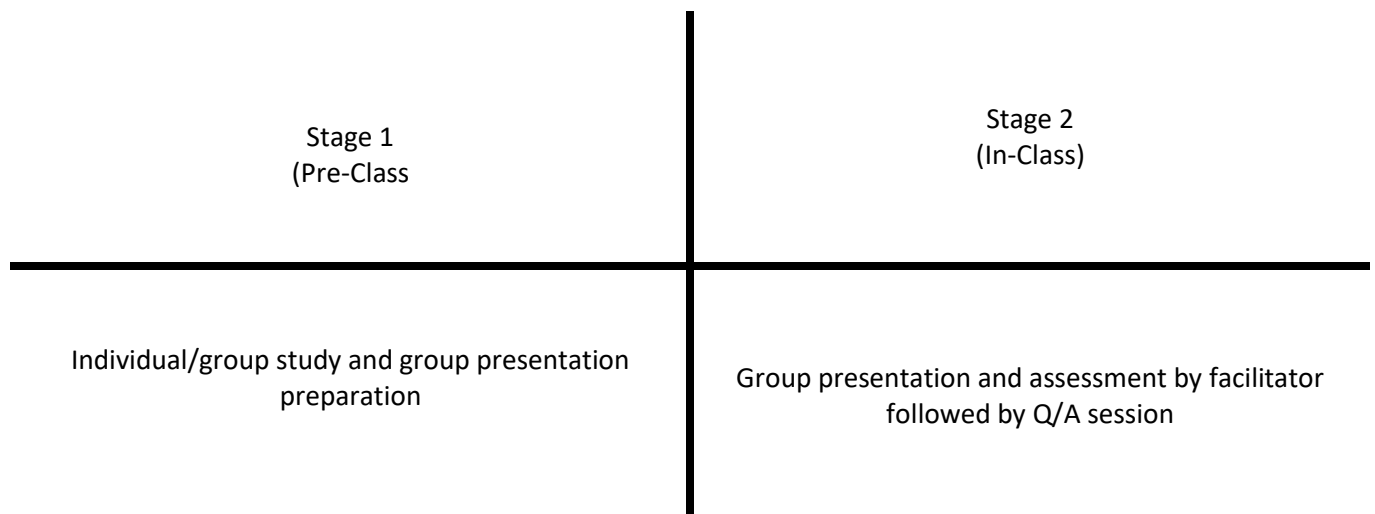
In this module, objectives will be achieved by using multiple instructional strategies other than lectures only. **Task oriented learning** is being introduced to enhance students' learning and to get insight of the content necessary to move forward in to practical application of course materials. Students will be engaged in self directed learning as well as peers' collaboration and faculty led instructions

**PROCESS of TOL**

Learning in this strategy will comprises of two stages

**Stage 1.** Pre-class learning in groups

**Stage 2.** In-class group focused active learning

**TOL process stage 1:**

Students will be divided in 6 groups (8-9 members in each group- **See Appendix: A**). Each week, students' group will be given task based on few objectives. These objectives are defined in this study guide. Students will have defined time slots for achieving the objectives. They will be required to study the recommended authentic website (*patient education websites are strictly NOT ADVISED!!!*) and work in groups to develop presentations during allotted study hours.

**TOL process stage 2:**

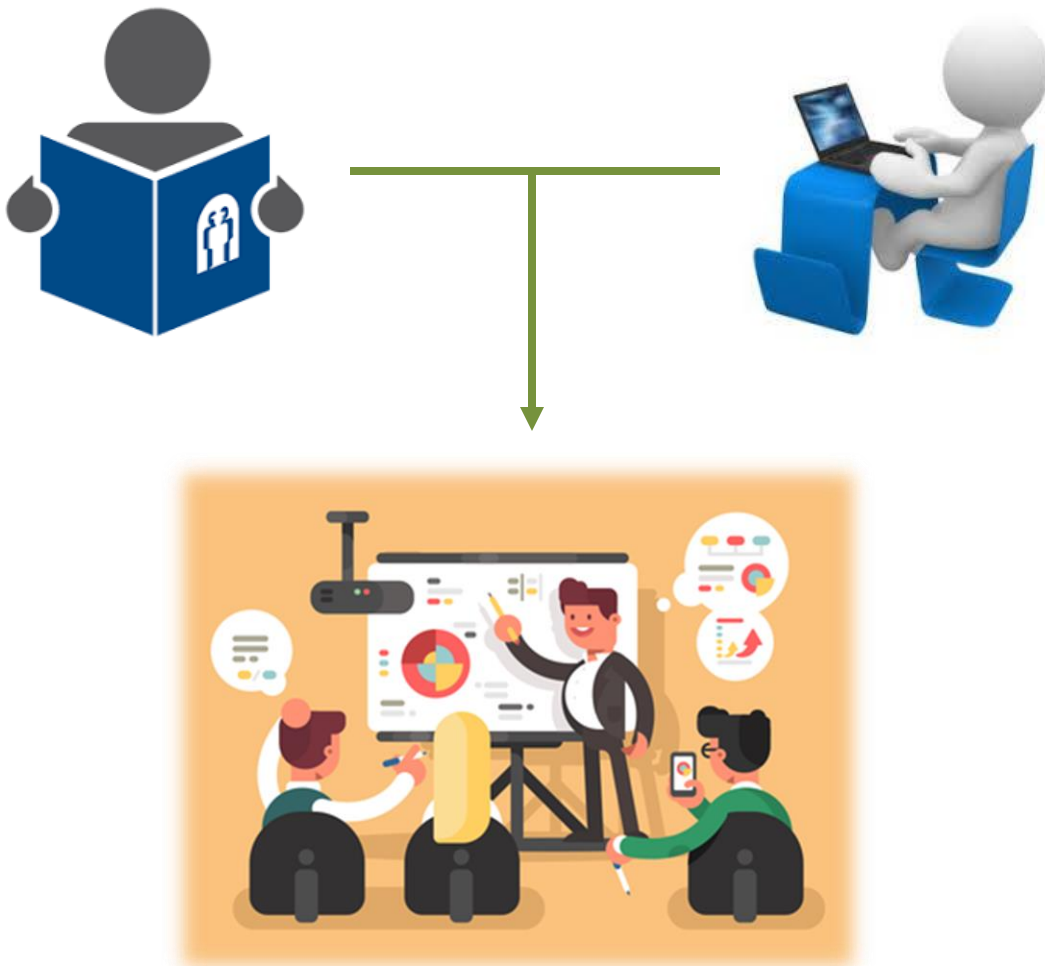
The groups will then be required to present their PPT/Prezi in class to show their understanding of subject matter.

**Time for group presentation:**

Each presentation should not exceed 10 minutes followed by five minutes discussion

**Assessment**

The group presentations and collaborative work will be graded on defined criteria. (**See Appendix: B**). Each student is to demonstrate active participation and effective contribution during the group activities. It is mandatory for the students to participate in this activity as their scores will contribute to **internal evaluation**.





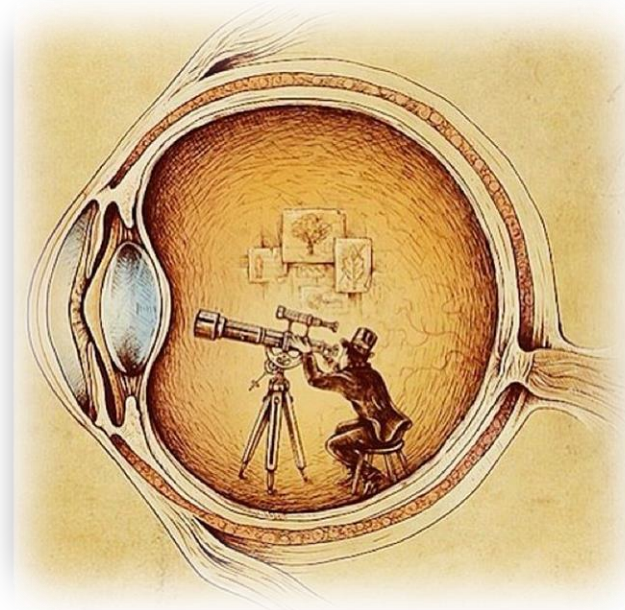
## SEMESTER 8 MODULE 1 : OPHTHALMOLOGY

### INTRODUCTION

Examination of the eye and adnexa is an important part of the general examination of a patient. The eye may reveal a wide variety of systemic diseases common in the population. An understanding of the effects of eye disease is critical to holistic patient care.

Moreover at least 2.5% of Pakistan's population suffers from blindness out of which 80% cases can be treated through awareness. Major causes of blindness include Cataract, corneal disease and glaucoma <sup>1</sup>.

This module will address common ophthalmological complaints you will encounter in primary care settings and also a number of ophthalmological conditions whose early recognition and cure can lead to prevention in disability and blindness.



<sup>1</sup> Dineen, B., Bourne, R.R., Jadoon, Z., Shah, S.P., Khan, M.A., Foster, A., Gilbert, C.E. and Khan, M.D., 2007. Causes of blindness and visual impairment in Pakistan. The Pakistan National Blindness and Visual impairment Survey. British Journal of Ophthalmology.

**COURSE OBJECTIVES AND STRATEGIES**

By the end of Ophthalmology (Eye) module students should be able to:

<b>ANATOMY</b>	
<b><i>Objectives</i></b>	<b><i>Teaching Strategy</i></b>
<ul style="list-style-type: none"> <li>Describe the functional anatomy of the orbit and the globe along with relevant nerve and blood supplies</li> </ul>	Interactive Lectures
<ul style="list-style-type: none"> <li>Discuss the embryology and histology of Retina</li> </ul>	
<b>PHYSIOLOGY</b>	
<ul style="list-style-type: none"> <li>Describe the process of normal vision, optics and the reflexes seen in normal eye</li> </ul>	Interactive Lectures
<b>PATHOLOGY</b>	
<ul style="list-style-type: none"> <li>Explain the pathology of the tumors involving eye including Basal Cell Carcinoma, Choroidal Melanoma, Squamous Cell Carcinoma and Retinoblastoma</li> </ul>	Interactive Lectures
<b>ORBIT</b>	
<ul style="list-style-type: none"> <li>Diagnose Orbital cellulitis and Proptosis based on clinical features, pathophysiology and relevant investigations</li> <li>Develop treatment plans for Cellulitis and Proptosis</li> </ul>	Cased-Cased Discussion

<b>LIDS</b>	
<ul style="list-style-type: none"> <li>• Diagnose the following on the basis clinical findings, pathology and their investigations:               <ul style="list-style-type: none"> <li>○ Blepharitis</li> <li>○ Stye</li> <li>○ Chalazion</li> <li>○ Trichiasis</li> <li>○ Entropion</li> <li>○ Ectropion</li> <li>○ Ptosis</li> </ul> </li> <li>• Explain the differential diagnosis and treatment plans for the above mentioned conditions</li> </ul>	Task Oriented Learning followed by task Presentation
<ul style="list-style-type: none"> <li>• Develop treatment plans for Basal cell, Squamous cell, Sebaceous carcinoma and Melanoma</li> <li>• Describe clinical features for diagnosis of Nevus and Papilloma</li> </ul>	
<b>CORNEA</b>	
<ul style="list-style-type: none"> <li>• Explain common corneal pathologies</li> <li>• Diagnose the corneal trauma, infections, vitamin A deficiency and Keratoconus on the basis of clinical findings, patho-physiology and relevant investigations</li> <li>• Explain the differential diagnosis and treatment plans for the corneal trauma, infections, vitamin A deficiency and Keratoconus</li> </ul>	Interactive Lecture
<b>CONJUNCTIVA</b>	
<ul style="list-style-type: none"> <li>• Diagnose Infective conjunctivitis, Allergic conjunctivitis and Pterygium on the basis clinical sign and symptoms and pathology</li> <li>• Select the relevant investigations for the above mentioned conditions</li> <li>• Discuss the differential diagnosis and treatment plans for infective conjunctivitis, allergic conjunctivitis and Pterygium</li> </ul>	Interactive Lecture

<b>SCLERA</b>	
<ul style="list-style-type: none"> <li>• Diagnose Episcleritis and Scleritis on the basis of clinical findings</li> <li>• Discuss the relevant investigations, differential diagnosis, pathophysiology and treatment plans for Episcleritis and Scleritis</li> </ul>	Case-Based Discussion
<b>LACRIMAL APPARATUS</b>	
<ul style="list-style-type: none"> <li>• Diagnose Epiphora, Acute and Chronic Dacryocystitis on the basis of clinical features along with their relevant investigations and pathology</li> <li>• Discuss the differential diagnosis and treatment plans for the Epiphora, Acute and Chronic Dacryocystitis</li> </ul>	Task Oriented Learning followed by task presentation
<b>UVEAL TRACT</b>	
<ul style="list-style-type: none"> <li>• Discuss differential diagnosis for red eye along with their etiology, pathology, investigations and treatment plans</li> </ul>	Interactive Lecture
<ul style="list-style-type: none"> <li>• Diagnose Uveitis on the basis of clinical features and relevant investigations</li> <li>• Discuss the differential diagnosis and treatment plans for Uveitis</li> </ul>	Case-Based Discussion
<b>LENS</b>	
<ul style="list-style-type: none"> <li>• Classify cataract</li> <li>• Describe cataract due to systemic diseases</li> <li>• Explain the symptoms, signs, investigations and management plan for congenital cataract</li> <li>• Diagnose acquired cataract based on symptoms, signs, pathophysiology and investigation findings</li> <li>• Justify selection of treatment options for acquired cataract</li> <li>• Explain congenital cataract secondary to rubella</li> </ul>	Interactive Lectures

<b>GLAUCOMA</b>	
<ul style="list-style-type: none"> <li>• Define Glaucoma</li> <li>• Classify glaucoma</li> <li>• Discuss the anatomy related to glaucoma</li> <li>• Discuss the etiology, patho-physiology, differential diagnosis and investigations for Glaucoma</li> <li>• Diagnose angle closure Glaucoma based on clinical findings</li> <li>• Discuss the treatment plans for angle closure glaucoma</li> <li>• Discuss the treatment plans for Glaucoma other than angle closure</li> </ul>	Interactive Lectures
<b>VITREO-RETINA</b>	
<ul style="list-style-type: none"> <li>• Examine the fundus with the help of ophthalmoscope</li> </ul>	Skills
<ul style="list-style-type: none"> <li>• Explain the signs, symptoms investigations and principles of management for posterior vitreous hemorrhage and Rhegmatogenous Retinal Detachment (RRD)</li> </ul>	Interactive Lecture
<ul style="list-style-type: none"> <li>• Discuss the retinal vascular diseases including central retinal vein occlusion (CRVO) and Central retinal artery occlusion (CRVA)</li> <li>• Discuss the differential diagnosis, complications and treatment plans for CRVO/CRVA</li> </ul>	Task Oriented Learning followed by task presentation
<ul style="list-style-type: none"> <li>• Discuss the clinical presentations, investigations and treatment options for Retinitis Pigmentosa, Retinoblastoma and Age Related Macular Degeneration (ARMD)</li> </ul>	Case-Based Discussion
<ul style="list-style-type: none"> <li>• Discuss the pathology and clinical sign and symptoms of retinopathy of prematurity (ROP) along with the relevant investigation</li> <li>• Discuss the complications and treatment plans for the ROP</li> </ul>	Interactive Lecture

<b>OPTIC NERVE</b>	
<ul style="list-style-type: none"> <li>• Discuss the differential diagnosis, pathology, provisional diagnosis, and investigations for Papilloedema, Optic Neuritis and Optic Atrophy</li> <li>• Formulate the treatment plans for Papilloedema, Optic Neuritis and Optic Atrophy</li> </ul>	Interactive Lecture
<b>VISUAL PATHWAY</b>	
<ul style="list-style-type: none"> <li>• Discuss the effects of lesions in the optic chiasma and visual pathway on visual field</li> </ul>	Case-Based Discussion
<b>INJURIES</b>	
<ul style="list-style-type: none"> <li>• Classify injuries to the eye based on etiology</li> <li>• Describe management plan for extra-ocular corneal and conjunctival foreign bodies</li> <li>• Discuss the management plans for ocular burns and chemical injuries</li> <li>• Develop management plans for all other types of injuries to the eye</li> </ul>	Interactive Lectures
<b>SQUINT AND AMBLYOPIA</b>	
<ul style="list-style-type: none"> <li>• Define Squint and Amblyopia</li> <li>• Discuss the relationship between squint and amblyopia</li> <li>• Discuss the clinical presentation of squint and amblyopia along with their differential diagnosis and relevant investigations</li> <li>• Discuss principles of management for these two conditions</li> </ul>	Task Oriented Learning followed by task Presentation
<b>ERRORS OF REFRACTION</b>	
<ul style="list-style-type: none"> <li>• Define Emertopia, Myopia, Hypermetropia, Astigmatism, Presbyopia, Aphakia, Pseudoaphakia and Anisometropia</li> <li>• Discuss the etiology and corrective measures for each type of error of refraction including the principles involved, use and procedure of pin hole test</li> </ul>	Interactive Lecture

<b>SYSTEMIC DISEASES</b>	
<ul style="list-style-type: none"> <li>• Discuss the effects of diabetes mellitus and hypertension eye and vision</li> <li>• Based on data provided, diagnose diabetic and hypertensive retinopathy</li> <li>• Discuss the patho-physiology of diabetic and hypertensive retinopathy</li> <li>• Describe principles of management for the two above mentioned conditions</li> <li>• Based on data provided, justify diagnosis, investigations and treatment plan for ocular conditions due to vitamin A deficiency</li> <li>• Discuss the effects of abnormal thyroid hormone levels on eye and vision</li> <li>• Diagnosis, investigations and treatment plan for conditions due to abnormal thyroid hormone levels (e.g. Grave's disease, Thyroid Ophthalmopathy)</li> </ul>	Interactive Lectures
<b>BLINDNESS</b>	
<ul style="list-style-type: none"> <li>• Discuss the six most common causes of blindness worldwide according to WHO criteria</li> <li>• Discuss etiology, preventive measures and principles of management for blindness</li> </ul>	Interactive Lecture

**Apart from attending daily scheduled sessions, students too should engage in self-study to ensure that all the objectives are covered**



**Objectives for Task Oriented Learning (TOL)**

By the end of the session students should be able to:

<b>Week 1:</b>
<b>LIDS</b>
<ul style="list-style-type: none"> <li>• Diagnose the following on the basis clinical findings and their investigations:               <ul style="list-style-type: none"> <li>○ Blepharitis</li> <li>○ Styne</li> <li>○ Chalazion</li> <li>○ Trichiasis</li> <li>○ Entropion</li> <li>○ Ectropion</li> <li>○ Ptosis</li> </ul> </li> <li>• Explain the differential diagnosis and treatment plans for the above mentioned conditions</li> <li>• Develop treatment plans for Basal cell, squamous cell, Sebaceous carcinoma and Melanoma</li> <li>• Describe clinical features for diagnosis of Nevus and Papilloma</li> </ul>
<b>LACRIMAL APPARATUS</b>
<ul style="list-style-type: none"> <li>• Diagnose Epiphora, Acute and Chronic Dacryocystitis on the basis of clinical features along with their relevant investigations</li> <li>• Discuss the differential diagnosis and treatment plans for the Epiphora, Actute and Chronic dacryocystitis</li> </ul>

<b>Week 2</b>
<b>Task 1:</b>
<b>VITREO-RETINA</b>
<ul style="list-style-type: none"> <li>• Discuss the clinical sign and symptoms along with the relevant investigation for retinal vascular diseases including central retinal vein occlusion (CRVO) and Central retinal artery occlusion (CRVA)</li> <li>• Discuss the differential diagnosis, complications and treatment plans for CRVO/CRVA</li> </ul>



**Week 2****Task 2:****SQUINT AND AMBLYOPIA**

- Define Squint and Amblyopia
- Discuss the relationship between squint and amblyopia
- Discuss principles of management for these two conditions

**Week 3****DIABETES MELLITUS**

- Discuss the effects of diabetes mellitus on eye and vision
- Based on data provided, diagnose diabetic retinopathy
- Discuss the patho-physiology of diabetic retinopathy
- Describe principles of management for the above mentioned condition

**LEARNING RESOURCES**

<b>SUBJECT</b>	<b>RESOURCES</b>
<b>ANATOMY</b>	<b>A. <u>GROSS ANATOMY</u></b> 1. K.L. Moore, Clinically Oriented Anatomy <b>B. <u>EMBRYOLOGY</u></b> 1. Keith L. Moore. The Developing Human 2. Langman's Medical Embryology
<b>COMMUNITY MEDICINE</b>	<b><u>TEXT BOOKS</u></b> 1. Community Medicine by Parikh 2. Community Medicine by M Ilyas 3. <i>Basic Statistics</i> for the Health Sciences by Jan W Kuzma
<b>OPHTHALMOLOGY</b>	<b><u>TEXT BOOK</u></b> Vaughan & Asbury's General Ophthalmology, 18th Edition  <b><u>WEBSITE:</u></b> <a href="https://timroot.com/">https://timroot.com/</a>
<b>PATHOLOGY/MICROBIOLOGY</b>	<b><u>TEXT BOOKS</u></b> 1. Robbins & Cotran, Pathologic Basis of Disease, 9th edition. 2. Rapid Review Pathology, 4th edition by Edward F. Goljan MD  <b><u>WEBSITES:</u></b> 1. <a href="http://library.med.utah.edu/WebPath/webpath.html">http://library.med.utah.edu/WebPath/webpath.html</a> 2. <a href="http://www.pathologyatlas.ro/">http://www.pathologyatlas.ro/</a>
<b>PHYSIOLOGY</b>	<b>A. <u>TEXTBOOKS</u></b> 1. Textbook Of Medical Physiology by Guyton And Hall 2. Ganong ' S Review of Medical Physiology 3. Human Physiology by Lauralee Sherwood 4. Berne & Levy Physiology 5. Best & Taylor Physiological Basis of Medical Practice

**ADDITIONAL LEARNING RESOURCES**

<b><u>Hands-on Activities/ Practical</u></b>	Students will be involved in Practical sessions and hands-on activities that link with the Eye Module to enhance learning.
<b><u>Museum</u></b>	Models available in the museum are a rich learning resource for quick review of anatomy and related educational activities
<b><u>Skills Lab</u></b>	Skills acquisition in a simulated environment in the skills lab involving experiential learning will ensure patient safety and will also help to build confidence in approaching the patients
<b><u>Videos/Podcasts</u></b>	Videos and podcasts will familiarize the student with the procedures and protocol which they can watch and listen to at any time and wherever they are, as part of task oriented learning
<b><u>Internet Resources</u></b>	Students will use easily accessible internet resources with added time flexibility to enrich and update their knowledge and its application

**ASSESSMENT METHODS:****Theory:**

- **Best Choice Questions (BCQs)** also known as MCQs (Multiple Choice Questions) are used to assess objectives covered in each module.
  - A BCQ has a statement or clinical scenario followed by four options (likely answer).
  - Students after reading the statement/scenario select ONE, the most appropriate response from the given list of options.
  - **Correct answer carries one mark, and incorrect 'zero mark'. There is no negative marking.**
  - Students mark their responses on specified computer-based/OMR sheet designed for LNHMC.
- **EMQs:**
  - An EMQ has:
    - An option list of 5-15 which may be nerve supply, functions, diagnosis, investigations etc
    - A Lead In –Statement/Question
    - Two to four Stems or Clinical Scenarios
  - For each stem or clinical scenario, the student should choose the most appropriate option from the option list.
  - A single option can be used once, more than once or not at all.
  - Correct answer carries one mark and incorrect 'zero mark'. There is **NO** negative marking.
  - Student mark their responses on a specified computer-based sheet for EMQs.

**OSPE/OSCE: Objective Structured Practical/Clinical Examination:**

- Each student will be assessed on the same content and have same time to complete the task.
- Comprise of 12-25 stations.
- Each station may assess a variety of clinical tasks, these tasks may include history taking, physical examination, skills and application of skills and knowledge
- Stations are observed, unobserved, interactive and rest stations.
- Observed and Interactive Stations:
  - They will be assessed by internal or external examiners through structured viva or tasks.
- Unobserved Stations:
  - It will be static stations in which there may be an X-ray, Labs reports, pictures, clinical scenarios with related questions for students to answer on the provided answer copy.
- Rest station

- It is a station where there is no task given and in this time student can organize his/her thoughts.

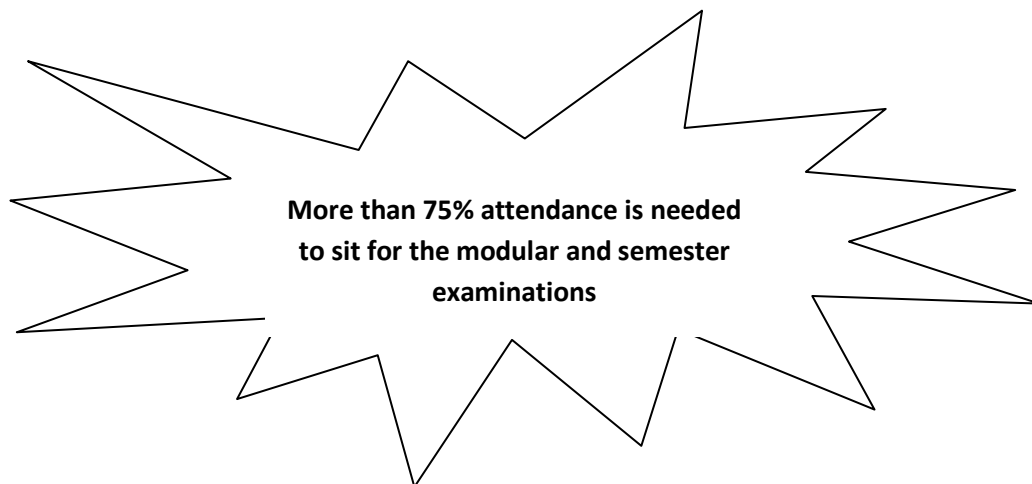
### LNHMC Internal Evaluation Policy

- Students will be assessed to determine achievement of module objectives through the following:
- **Module Examination:** will be scheduled on completion of each module. The method of examination comprises theory exam which includes BCQs and OSPE (Objective Structured Practical Examination).
- **Graded Assessment of students by Individual Department:** Quiz, viva, practical, assignment, small group activities such as CBL, TBL, TOL, online assessment, ward activities, examination, and log book.
- Marks of both modular examination and graded assessment will constitute 20% weightage.
- As per JSMU policy, this 20% will be added by JSMU to Semester Examination.

Example : Number of JSMU Marks allocated for Semester Theory and Internal Evaluation			
Semester	Semester Examination Theory Marks	Internal Evaluation (Task Presentation + Assignments + Modular Eaam	Total (Theory)
	80%	20%	100%

### Formative Assessment

- Individual department may hold quiz or short answer questions to help students assess their own learning. The marks obtained are not included in the internal evaluation



**MODULAR EXAMINATION RULES & REGULATIONS (LNH&MC)**

- Student must report to examination hall/venue, 30 minutes before the exam.
- **Exam will begin sharp at the given time.**
- No student will be allowed to enter the examination hall after 15 minutes of scheduled examination time.
- Students must sit according to their roll numbers mentioned on the seats.
- **Cell phones are strictly not allowed in examination hall.**
- If any student is found with cell phone in any mode (silent, switched off or on) he/she will be not be allowed to continue their exam.
- No students will be allowed to sit in exam without University Admit Card, LNMC College ID Card and Lab Coat
- Student must bring the following stationary items for the exam: Pen, Pencil, Eraser, and Sharpener.
- Indiscipline in the exam hall/venue is not acceptable. Students must not possess any written material or communicate with their fellow students.

**SEMESTER EXAMINATION RULES & REGULATIONS OF JINNAH SINDH MEDICAL UNIVERSITY (JSMU)**

- In one academic year there will be two semesters. The semester duration is approximately sixteen/seventeen weeks.
- Each semester may have two to three modules from two to eight weeks duration.

**JSMU EXAMINATIONS:**

- **JSMU** will schedule and hold Semester Examinations on completion of each semester.
- In one academic year, there will be two semester examinations and one Retake Examination.

**MBBS Fourth year:**

- **Semester VII examination** is scheduled on completion of **EYE**, Orthopedics and Reproductive System-II modules.
- **Semester VIII examination** is scheduled on completion of ENT/EYE, Dermatology, Plastic Surgery & Burns, Neuro-Sciences-II & Psychiatry, Genetics and Rehabilitation modules.

**Examination Protocols:**

- In each semester, module will be assessed by theory paper comprising MCQs and EMQs. For example semester 8 will have separate theory paper of **EYE**, Dermatology, Plastic Surgery & Burns, Neuro-Sciences-II & Psychiatry, Genetics and Rehabilitation modules.
- There will be one OSPE (Objective Structured Practical Examination)/OSCE (Objective Structured Clinical Examinations) which will cover all three modules of semester seven.

**1. Theory**

- Theory paper will comprise of 80 one best type MCQs and 20 EMQs.
- Time duration for theory paper will be 120 minutes.
- Students will mark their responses on JSMU specified response sheets assessed by computer software.
- It will carry out 80% contribution in theory results of the Semester.
- There is no negative marking.

**2. OSPE/OSCE:**

- It may comprise between 12- 25 stations. Each station will carry 10 marks.

**3. JSMU Grading System**

- It will be based on GPA – 4 system

Marks obtained in Percentage range	Numerical Grade	Alphabetical Grade
80-100	4.0	A+
75-79	4.0	A
70-74	3.7	A-
67-69	3.3	B+
63-66	3.0	B
60-62	2.7	B-
56-59	2.3	C+
50-55	2.0	C
<50 Un-grade-able	0	U

- A candidate obtaining GPA less than 2.00 (50%) is declared un-graded (fail).
- Cumulative transcript is issued at the end of clearance of **all** modules.

#### 4. Retake Examination

- Retake examination will be held after each semester examination as per meeting held on 12 April 2017 (Ref.No.JSMU/REG/2017/-314)
- Retake examinations are for those students who fail in semester examinations, and those who have passed semester examinations with GPA less than 3.0 may reappear in respective retake examination to improve grades.
- The format of the retake examination is exactly the same as in semester examinations.
- Retake examination will be conducted 3 weeks after declaration of results.

#### 5. Promotion to next class

- Students who pass both semester examinations are promoted from first year to second year.
- Students who fail the MBBS first year semester retake examination will be promoted to second year.
- Students will be promoted from **second year to third year and onward only** if they have passed the semester examinations of that year.
- Clearance of all modules and their components of semester one to four are mandatory for promotion from second year to third year (as per PMDC rules).
- As per PMDC rules any candidate failing to clear a module or its component in four (1+3) attempts is **NOT** allowed to carry out further medical education.
- Clearance of all modules and their components of semester/s are mandatory for promotion from third year onward.



**SCHEDULE:**

WEEKS	4 <sup>th</sup> Year SEMESTER 7	MONTH
WEEK 1	OPHTHALMOLOGY	23 <sup>rd</sup> April 2018
WEEK 2		
WEEK 3		
WEEK 4		11 <sup>th</sup> May 2018
	MODULAR EXAM	12 <sup>th</sup> May 2018*
WEEK 1	DERMATOLOGY	May 2018*
WEEK 2		May 2018*
	MODULAR EXAM	May 2018*
WEEK 1	NEUROSCINCES II	June 2018*
WEEK 2		
WEEK 3		
WEEK 4		
WEEK 5		July 2018*
		July 2018*
WEEK 1	GENETICS	July 2018*
WEEK 2		August 2018*
	MODULAR EXAM	August 2018*
WEEK 1	REHABILITATION	August 2018*
WEEK 2		Sept 2018*
	MODULAR EXAM	Sept 2018*
PREPARATORY LEAVE		
	SEMESTER EXAM	

\*Final dates will be announced later

**APPENDIX: A**

**LIAQUAT NATIONAL MEDICAL COLLEGE**  
**FOURTH YEAR MBBS, SEMESTER VIII ENT/EYE MODULE**  
**Criteria: Group Task Presentation**

Speaker/Group: \_\_\_\_\_

Assignment: \_\_\_\_\_

This criteria is designed to clarify the grading process for Group Oral Presentations	Not Acceptable	Poor	Average	Good	Excellent
	0	1	2	3	4
<b>Content</b>					
1. Objective were achieved during the presentation					
2. Information in presentation is clear and organized.					
3. Material presented was derived from authentic sources					
4. Queries answered appropriately					
<b>Collaboration</b>					
5. Every member of the group contributed to the presentation.					
6. Smooth transition of group members from one presenter to another during presentation.					
<b>Presentation Style/ Professionalism</b>					
7. Appropriate interaction with audience members.					
8. Readiness to present at scheduled time.					
9. Presentation completed within assigned time					

Marks obtained out of 36: \_\_\_\_\_

Facilitators' signature: \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

**APPENDIX B:**

SR.#	Roll. #	Name of Students	Sub Group
<b>Group-A</b>			
1	MC/2020/001	Aatqua Nadeem	<b>A1</b>
2	MC/2020/002	Aisha Bibi	
3	MC/2020/003	Akash Kumar	
4	MC/2020/004	Akasha Haroon	
5	MC/2020/005	Aliha	
6	MC/2020/006	Alizay Rehman	
7	MC/2020/007	Anees Mazhar	
8	MC/2020/009	Aqsa	<b>A2</b>
9	MC/2020/010	Arifa Bashir	
10	MC/2020/011	Arshia Siddiqua	
11	MC/2020/012	Asad Mehdi	
12	MC/2020/013	Ayesha	
13	MC/2020/014	Ayesha Khan	
14	MC/2020/015	Bakhtawar Mubeen	
15	MC/2020/016	Bilal Yousuf	
16	MC/2020/017	Deepak Kumar	<b>A3</b>
17	MC/2020/018	Dhanwanti Devi	
18	MC/2020/019	Eraj Javed	
19	MC/2020/020	Faiza Faisal	
20	MC/2020/021	Faiza Raheem	
21	MC/2020/022	Fariha Ejaz	
22	MC/2020/023	Fatima Suleman	
23	MC/2020/024	Fizzah Qamar	
24	MC/2020/025	Ganpat Kumar	

<b>Group-B</b>			
1	MC/2020/026	Gul Muhammad	<b>B1</b>
2	MC/2020/027	Hadiqa Sana	
3	MC/2020/028	Hafiz Ali Shabbir Rajput	
4	MC/2020/029	Hanesh Tanwani	
5	MC/2020/030	Haresh Kumar	
6	MC/2020/031	Hiba Rasheed	
7	MC/2020/032	Hina Javeria	
8	MC/2020/033	Hira Razaqat	
9	MC/2020/034	Hunaiza Muhammad Siraj	<b>B2</b>
10	MC/2020/035	Iftikhar Ahmed	
11	MC/2020/037	Imran Khan	
12	MC/2020/038	Jai Parkash	
13	MC/2020/039	Jai Shankar	
14	MC/2020/040	Kainat Fatima	
15	MC/2020/041	Kanchan Kumari	
16	MC/2020/042	Kashmalla	
17	MC/2020/043	Khushbakht Rashid	<b>B3</b>
18	MC/2020/044	Kiran Zahid	
19	MC/2020/045	Laiba Amini	
20	MC/2020/046	Maham Atta	
21	MC/2020/047	Maira Hassan	
22	MC/2020/049	Mehran Khan	
23	MC/2020/050	Mehroze Fatima	
24	MC/2020/051	Mirza Usman Baig	