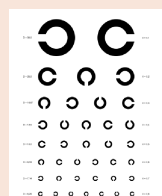


Rotation Ophthalmology (OPH-523)

STUDY GUIDE



Sohag Faculty of Medicine

Sohag University

Prepared by

Departments of Ophthalmology

Under supervision of

Medical Education Department

Faculty of Medicine

Sohag University

2024 - 2025

Ophthalmology (OPH-523) Study Guide

Contact Information of Staff Responsible for Block Ophthalmology V (OPH-523)

Block Medicine V(OPH-523) Coordinator
Dr. Islam Saad Assistant Professor of Ophthalmology eslamsaad@med.sohag.edu.eg
Head of the Department
Prof. Dr. Hatem Gamal Professor of Ophthalmology

Staff Participated
All Staff Members of Ophthalmology Department

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Basic Information about the Block

● **Program on which the course is given:**

Bachelor of Medicine and Surgery (M.B. B.Ch.).

● **Elements (major or minor) of the program:**

Undergraduate

● **Departments offering the course:**

Ophthalmology department.

Academic. year/level:

5th year

Prerequisites

Achieving 75% of points of blocks in the first 5 semesters

Date of specification approval:

2023-2024/ 2024-2025

⊕ **Title:** Ophthalmology

⊕ **Code:** OPH - 523

⊕ **Credit points:** 9

⊕ **Weeks:** 6 weeks

⊕ **Lectures:** 40 hours

⊕ **Practicals:** 60 hours

⊕ **Case based discussions:** 35 hours

⊕ **Student learning activities:** 105 hours including Portfolio: (65) 3.5 points

Formative assessment: (30) 1 point

Total: 270 hours.

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Block Map

The total hours of the final written exam	Total marks	Days/weeks	Points	Code	Responsible department	الوحدة التعليمية Block	Year
2 hours	180	5×6	9	OPH-523	Ophthalmology	Ophthalmology أمراض العين	5th Year

NARS competencies the block is expected to share in their student achievement

NARS areas	NARS key competencies
1. The graduate as a health care provider.	1.1. Take and record a structured, patient centered history.
	1.2. Adopt an empathic and holistic approach to the patients and their problems.
	1.3 Assess the mental state of the patient.
	1.4. Perform appropriately timed full physical examination of patients appropriate to the age, gender, and clinical presentation of the patient while being culturally sensitive.
	1.5. Prioritize issues to be addressed in a patient encounter.
	1.6. Select the appropriate investigations and interpret their results taking into consideration cost/ effectiveness factors.
	1.7. Recognize and respond to the complexity, uncertainty, and ambiguity inherent in medical practice.
	1.8. Apply knowledge of the clinical and biomedical sciences relevant to the clinical problem at hand.
	1.10. Integrate the results of history, physical and laboratory

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	test findings into a meaningful diagnostic formulation.
	1.11. Perform diagnostic and intervention procedures ² in a skillful and safe manner, adapting to unanticipated findings or changing clinical circumstances.
	1.12. Adopt strategies and apply measures that promote patient safety.
	1.13. Establish patient-centered management plans in partnership with the patient, his/her family and other health professionals as appropriate, using Evidence Based Medicine in management decisions.
	1.14. Respect patients' rights and involve them and /or their families/careers in management decisions.
	1.15. Provide the appropriate care in cases of emergency, including cardio-pulmonary resuscitation, immediate life support measures and basic first aid procedures.
2. The graduate as a health promoter.	2.3 Discuss the role of nutrition and physical activity in health.
	2.5 Describe the principles of disease prevention, and empower communities, specific groups or individuals by raising their awareness and building their capacity.
	2.6 Recognize the epidemiology of common diseases within his/her community, and apply the systematic approaches useful in reducing the incidence and prevalence of those diseases.
	2.9 Adopt suitable measures for infection control.
3. The graduate as a professional.	3.1. Exhibit appropriate professional behaviors and relationships in all aspects of practice, demonstrating honesty, integrity, commitment, compassion, and respect.
	3.3. Respect the different cultural beliefs and values in the community they serve.
	3.4. Treat all patients equally, and avoid stigmatizing any category regardless of their social, cultural, ethnic backgrounds, or their disabilities.
	3.5. Ensure confidentiality and privacy of patients' information.
	3.6. Recognize basics of medico-legal aspects of practice, malpractice and avoid common medical errors.
	3.7. Recognize and manage conflicts of interest.
	3.8. Refer patients to appropriate health facility at the appropriate stage.
	3.9. Identify and report any unprofessional and unethical behaviors or physical or mental conditions related to himself, colleagues or any other person that might jeopardize patients' safety.
4. The graduate as a scholar and scientist.	4.5 Identify various causes (genetic, developmental, metabolic, toxic, microbiologic, autoimmune, neoplastic, degenerative, and traumatic) of illness/disease and explain the ways in which they operate on the body (pathogenesis).
	4.7 Describe drug actions: therapeutics and pharmacokinetics;

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	side effects and interactions, including multiple treatments, long term conditions and non-prescribed medication; and effects on the population.
	4.8 Demonstrate basic sciences specific practical skills and procedures relevant to future practice, recognizing their scientific basis, and interpret common diagnostic modalities, including: imaging, electrocardiograms, laboratory assays, pathologic studies, and functional assessment tests.
5. The graduate as a member of the health team and a part of the health care system.	5.1 Recognize the important role played by other health care professions in patients' management.
	5.2 Respect colleagues and other health care professionals and work cooperatively with them, negotiating overlapping and shared responsibilities and engaging in shared decision-making for effective patient management.
	5.3 Implement strategies to promote understanding, manage differences, and resolve conflicts in a manner that supports collaborative work.
	5.4 Apply leadership skills to enhance team functioning, the learning environment, and/or the health care delivery system.
	5.5 Communicate effectively using a written health record, electronic medical record, or other digital technology.
	5.6 Evaluate his/her work and that of others using constructive feedback.
	5.7 Recognize own personal and professional limits and seek help from colleagues and supervisors when necessary.
	5.9 Use health informatics to improve the quality of patient care.
	5.10 Document clinical encounters in an accurate, complete, timely, and accessible manner, in compliance with regulatory and legal requirements.
6. The graduate as a lifelong learner and researcher.	5.12 Demonstrate accountability to patients, society, and the profession.
	6.1 Regularly reflect on and assess his/her performance using various performance indicators and information sources.
	6.2 Develop, implement, monitor, and revise a personal learning plan to enhance professional practice
	6.3 Identify opportunities and use various resources for learning.
	6.4 Engage in inter-professional activities and collaborative learning to continuously improve personal practice and contribute to collective improvements in practice.
	6.6 Effectively manage learning time and resources and set priorities.
	6.8 Critically appraise research studies and scientific papers in terms of integrity, reliability, and applicability.
	6.10 Summarize and present to professional and lay audiences

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the findings of relevant research and scholarly inquiry.

Professional Information

Block Aims

Overall Aims

1. This block aims to provide students with fundamental knowledge and clinical skills that enable him/her to detect, manage and/or refer common and important **ophthalmology topics**.
2. By the end of the blocks, the students will be able to take informative history, perform appropriately timed physical examination of patients appropriate to the age, gender, and clinical presentation of the patient while being culturally sensitive, do some clinical procedures and interpret important investigations related to **ophthalmology**.
3. By the end of the blocks, the students will be able counsel patients and their families about common **ophthalmological conditions**.

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Learning Outcomes of **the Block**:

Competencies adopted by NARS:

- 4.1 Describe the normal structure of the body and its major organ systems and explain their functions.
- 4.2 Explain the molecular, biochemical, and cellular mechanisms that are important in maintaining the body's homeostasis.
- 4.3 Recognize and describe main developmental changes in humans and the effect of growth, development and aging on the individual and his family.
- 4.4 Explain normal human behavior and apply theoretical frameworks of psychology to interpret the varied responses of individuals, groups and societies to disease.
- 4.5 Identify various causes (genetic, developmental, metabolic, toxic, microbiologic, autoimmune, neoplastic, degenerative, and traumatic) of illness/disease and explain the ways in which they operate on the body (pathogenesis).
- 4.6 Describe altered structure and function of the body and its major organ systems that are seen in various diseases and conditions.
- 5.2 Respect colleagues and other health care professionals and work cooperatively with them, negotiating overlapping and shared responsibilities and engaging in shared decision-making for effective patient management.
- 5.3 Implement strategies to promote understanding, manage differences, and resolve conflicts in a manner that supports collaborative work.
- 5.4 Apply leadership skills to enhance team functioning, the learning environment, and/or the health care delivery system.
- 5.6 Evaluate his / her work and that of others using constructive feedback.
- 6.1 Regularly reflect on and assess his / her performance using various performance indicators and information sources.
- 6.2 Develop, implement, monitor, and revise a personal learning plan to enhance professional practice.
- 6.7 Demonstrate an understanding of the scientific principles of research including its ethical aspects and scholarly inquiry and Contribute to the work of a research study.
- 6.9 Analyze and use numerical data including the use of basic statistical methods.

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Structure of the block

<i>Week</i>	Lectures (NUMBER)	Practical (NUMBER)	PORTFOLIO TASKS (NUMBER)	CASE BASED Discussions (NUMBER)
1st	2	2 x 5	1	1 x 5
2nd	2	2 x 5	2	1 x 5
3rd	2	2 x 5	3	1 x 5
4th	2	2 x 5	4	1 x 5
5th	2	2 x 5	5	1 x 5
6th	2	2 x 5	6	1 x 5

As regard lecture, practical and case-based discussion, Number = contact hours

Learning Methods

- 1- Lectures for knowledge outcomes.
- 2- Practical (Bedside/skill lab) sessions to gain clinical skills.
- 3- Task based log (may use incision academy/clinical key cases).
- 4- Group discussions (Case – based).

Methods of Student Assessment

1. Formative:

This is used to monitor student's learning to provide ongoing feedback that can be used by instructors to improve their teaching and by students to improve their learning. It's given once weekly and the answers are presented and discussed immediately with you after the assessment.

2. Summative

It is used to evaluate student's achievements at the end of an instructional unit. The grades tell whether the student achieved the learning goal or not.

The student's performance will be assessed according to the following:

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Assessment task	Type of assessment	Proportion of total assessment	
		%	Marks
End block exam	MCQ	20%	36
Portfolio	Task based log	10%	18
Final written exam	75 % MCQ (54 marks) 25% short answer and modified essay questions (18 marks)	40%	72
OSCE Final	Typical OSCE stations using standardized, real or skill lab encounters	30%	54
Total		100%	180

Block evaluation

- Students' results
- Students' feedback
- Tutors' feedback

Contents

Lecture Topics and Their Intended Learning Outcomes

Choose one source for each topic

No.	Learning outcomes A	Lectures Titles And specified reference	Week No.	Date*		Contact Hours
				From	to	
1.	A1-4, A6-9, A14, -29, A31- 54, A54 -68, A67-79	-Anatomy and physiology of the eye	1 st week			1
2.	A1-4, A6-9, A14, -29, A31- 54, A54 -68, A67-79	-Eye lid	1 st week			2
3.	A10, A11, A12, A31- K33, A39, A40, A48, A49, A54, A69, A70, A71	- Cornea	2 nd week			3
4.	A1-4, A6-9, A14-, A16- 20, A24 -29, A29- 46, A46 - 56, A54 -68, A67-79	-Uvea	3 rd week			2
5.	A1-4, A6-9, A14- 25, A24 -29, A31- 46, A46 - 54, A54 -68, A67-79	-Conjunctiva	3 rd week			2
	A1-4, A6-9, A14- 25, A24 -29, A31- 46, A46 - 54, A54 -68, A67-79	-Sclera	4 th week			1
	A1-4, A6-9, A14- 25, A24 -29, A31- 46, A46 - 54, A54 -68, A67-79	-Lacrimal	4 th week			2
	A1-4, A6 -8, A14, A16-20, A31- 46, A46 - 55, A54 -68, A67-79	- Glaucoma	5 th week			4
	A1-4, A6-9, A14- 25, A24 -29, A29, A30 - 46, A46 - 55, A54 -68, A67-79	-Cataract	6 th week			3

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	A1-4, A6-9, A14, A16-20, A24 -29, A29- 46, A46 - 56, A54 -68, A67-79	-Neuro-ophthalmology	7 th week			2
	A1-4, A6-9, A14-, A16- 20, A24 -29, A29- 46, A46 - 56, A54 -68, A67-79	-Retina & vitreous	8 th week			3
	A1-4, A6-9, A14, A16-20, A24 -29, A29- 46, A46 - 56, A54 -68, A67-79	-Optic nerve	9 th week			1
	A1-4, A6-9, A14, A16-20, A24 -29, A29- 46, A46 - 56, A54 -68, A67-79	-Orbit	9 th week			2
	A1-4, A6 -8, A14, A16-20, A31- 46, A46 - 55, A54 -68, A67-79	-Strabismus	10 th week			3
	A1-4, A6-9, A14, A16-20, A24 -29, A29- 46, A46 - 56, A54 -68, A67-79	-Refractive errors	11 th week			1
	A1-4, A6-9, A14-, A16- 20, A24 -29, A29- 46, A46 - 56, A54 -68, A67-79	-D.D of red eye	11 th week			2
	A1-4, A6-9, A14-, A16- 20, A24 -29, A29- 46, A46 - 56, A54 -68, A67-79	-Ocular investigations	12 th week			1
	A1-4, A6-9, A14-, A16- 20, A24 -29, A29- 46, A46 - 56, A54 -68, A67-79	-Ocular trauma	12 th week			2
	A1-4, A6-9, A14-, A16- 20, A24 -29, A29- 46, A46 - 56, A54 -68, A67-79	-Ocular tumors	13 th week			1
	A1-4, A6 -8, A14, A16- 20, A31- 46, A46 - 54, A54 -68, A67-79	-Ocular emergencies and medications	13 th week			2
		Total				40

***Date is recorded in the timetable**

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Skills and tasks and Their Intended Learning Outcomes

In addition to real patients and skills stated in the NARS should be learned either in practical or group discussion

No.	Learning outcomes C and A	Bedside/skill lab sessions and titles	Weeks	Date*		Hours
				From	To	
1.	C1-C10, C24, C25, C31, C38, C39 -44, C49, C51- 56, C57, C58, C60- 64 A1, A2, A5- A10, A11, A14-18, A20, A21, A23- 43, A43-A55	- Construct an accurate and complete ocular history: - Ocular symptoms (<i>Redness, discharge, itching, Pain, photophobia, Central visual disturbance, Peripheral visual disturbance, Floaters, Flashing lights, Leukocoria, Colour vision abnormalities, nyctalopia</i>) - History of presenting complaint (<i>Onset/duration</i>) - Past ocular history (<i>Refractive error, Previous surgery, or trauma</i>). - Past medical history (<i>DM, hypertension, sickle cell disease, systemic infection, systemic autoimmune disease, or malignancy</i>) - Drug history Topical or Systemic as steroids - Social history (<i>Smoking, alcohol, and drug use, occupational visual tasks</i>) - Measure visual acuity with and without correction and with a pinhole. - Distinguish between sudden and gradual diminution of vision.	1 st Week			2*5

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2.	C1-C10, C24, C25, C31, C38, C39 -44, C49, C51- 56, C57, C58, C60- 64 A1, A2, A5- A10, A11, A14-18, A20, A21, A23- 43, A43-A55	- Inspect position of the eyelids (Normal lid position, lid retraction, ptosis, Entropion, Ectropion, Lagophthalmos) - Identify signs of previous trachomatous infection. - Examine the anterior segment by Penlight, including upper lid eversion. - Demonstrate Ptosis evaluation, surgery for good and poor Levator function.	2 nd week			2*5
3.	C12, C18, C19, C20, C36 A4	- Identify signs of previous trachomatous infection. - Identify conjunctival degenerations (Pterygium, Pinguecula) - Examine the anterior segment by Penlight, including upper lid eversion. - Inspect the conjunctiva, anterior segment with a penlight. - Review demonstrative videos for surgical treatment of pterygium.	3 rd week			2*5
4.	C1-11, C13- 17, C21-37, C38- C64 A1-3, A5- 57	- Identify patients with epiphora (congenital and acquired), and dacryocystitis - How to perform lacrimal sac massage and regurge test - How to perform lacrimal syringing and probing and interpretation of results - Inspect medial canthal region - Review demonstrative videos of intubation and DCR surgery	4 th week			2*5

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		- Summarize the evaluation of patient with dry eye - How to perform and interpret Schirmer test - How to perform and interpret tear film break up time				
5.	C1-11, C13- 17, C21-37, C38- C64 A1-3, A5- 57	- Detection of corneal epithelial defect using fluorescein stain. - Differentiation between different types of lenses used for correction of refractive errors. - Interpreting the glasses prescriptions for correction of refractive errors.	5 th week			2*5
6.	C1-11, C13- 17, C21-37, C38- C64 A1-3, A5- 57	- Obtain history to determine risk factors of primary open angle glaucoma. - Measure visual acuity with near card. - Perform confrontation visual field testing in four quadrants for each eye. - Assess pupillary reaction for RAPD. - Estimate anterior chamber depth with penlight. - Diagnose acute angle closure glaucoma by history and penlight examination. - Recognize signs of optic nerve injury (increased cupping and asymmetric cupping). - Demonstrate different methods for IOP measurement.	6 th week			2*5
		Total				60

***Date is recorded in the timetable**

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Self -Directed Learning and Group Discussion (SDL &GD) (cases scenario), In addition to real patients

No.	Learning outcomes A and C	Title of cases and reference	Weeks	Date*		Hours
				from	To	
1	A1-4, A6-9, A14, -29, A31-54, A54 -68, A67-79 A1-3, A5- 57	Case 1: Routine eye examination	1 st week			6
2	A1-4, A6-9, A14- 25, A24 -29, A31- 46, A46 - 54, A54 -68, A67-79 A1-3, A5- 57	Case 2: Hordeolum				
3	A1-4, A6-9, A14- 25, A24 -29, A31- 46, A46 - 54, A54 -68, A67-79 A1-3, A5- 57	Case 3: Blepharitis				
4	A1-4, A6 -8, A14, A16- 20, A31- 46, A46 - 54, A54 -68, A67-79 A1-3, A5- 57	Case 4: Corneal abrasion				
5	A1-4, A6-9, A14- 25, A24 -29, A31- 46, A46 - 54, A54 -68, A67-79 A1-3, A5- 57	Case 5: Corneal ulcer				
6	A10, A11, A12, A31- A33, A39, A40, A48, A49, A54, A69, A70, A71, A1-3, A5- 57	Case 6: Herpetic keratitis	2 nd week			6
7	A10, A11, A12, A31- A33, A39, A40, A48, A49, A54, A69, A70, A71, A1-3, A5- 57	Case 7: Sympathetic ophthalmitis				
8	A1-4, A6-9, A14- 25, A24 -29, A29, A30 - 46, A46 - 55, A54 -68, A67-79 A1-3, A5- 57	Case 8: Chlamydial Conjunctivitis				
9	A10, A11, A12, A31- A33, A39, A40, A48, A49, A54, A69, A70, A71, A1-3, A5- 57	Case 9: Allergic conjunctivitis				
10	A1-4, A6 -8, A14, A16-20, A31- 46, A46 - 55, A54 -68, A67-79 A1-3, A5- 57	Case 10: Allergic conjunctivitis				
11	A1-4, A6-9, A14-, A16- 20, A24 -29, A29- 46, A46 - 56, A54 -68, A67-79 A1-3, A5- 57	Case 11: Acute dacryocystitis	3 rd week			6

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12	A1-4, A6-9, A14-, A16- 20, A24 -29, A29- 46, A46 - 56, A54 -68, A67-79 A1-3, A5- 57	Case 12: Open-angle glaucoma				
13	A10, A11, A12, A31- A33, A39, A40, A48, A49, A54, A69, A70, A71, A1-3, A5- 57	Case 13: Angle-closure glaucoma				
14	A1-4, A6-9, A14-, A16- 20, A24 -29, A29- 46, A46 - 56, A54 -68, A67-79 A1-3, A5- 57	Case 14: Acute congestive glaucoma				
15	A1-4, A6-9, A14, -29, A31- 54, A54 -68, A67-79 A1-3, A5- 57	Case 15: Cataract				
16	A1-4, A6-9, A14- 25, A24 - 29, A31- 46, A46 - 54, A54 - 68, A67-79 A1-3, A5- 57	Case 16: Diabetic cataract	4 th week			6
17	A1-4, A6-9, A14- 25, A24 - 29, A31- 46, A46 - 54, A54 - 68, A67-79 A1-3, A5- 57	Case 17: Post operative endophthalmitis				
18	A1-4, A6 -8, A14, A16- 20, A31- 46, A46 - 54, A54 -68, A67-79 A1-3, A5- 57	Case 18: Retinal detachment (RD)				
19	A1-4, A6-9, A14- 25, A24 - 29, A31- 46, A46 - 54, A54 - 68, A67-79 A1-3, A5- 57	Case 19: Central retinal artery occlusion (CRAO)				
20	A10, A11, A12, A31- A33, A39, A40, A48, A49, A54, A69, A70, A71, A1-3, A5- 57	Case 20: Age-related macular degeneration (AMD)				
21	A10, A11, A12, A31- A33, A39, A40, A48, A49, A54, A69, A70, A71, A1-3, A5- 57	Case 21: Optic neuritis	5 th week			6
22	A1-4, A6-9, A14- 25, A24 - 29, A29, A30 - 46, A46 - 55, A54 -68, A67-79 A1-3, A5- 57	Case 22: Papilledema				
23	A10, A11, A12, A31- A33, A39, A40, A48, A49, A54, A69, A70, A71, A1-3, A5- 57	Case 23: Dysthyroid ophthalmopathy				

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24	A1-4, A6 -8, A14, A16-20, A31- 46, A46 - 55, A54 -68, A67-79 A1-3, A5- 57	Case 24: Refractive errors				
25	A1-4, A6-9, A14-, A16- 20, A24 -29, A29- 46, A46 - 56, A54 -68, A67-79 A1-3, A5- 57	Case 25: Infantile esotropia				
26	A1-4, A6-9, A14-, A16- 20, A24 -29, A29- 46, A46 - 56, A54 -68, A67-79 A1-3, A5- 57	Case 26: Trochlear nerve palsy	6 th week			5
27	A10, A11, A12, A31- A33, A39, A40, A48, A49, A54, A69, A70, A71, A1-3, A5- 57	Case 27: Leukocoria				
28	A1-4, A6-9, A14-, A16- 20, A24 -29, A29- 46, A46 - 56, A54 -68, A67-79 A1-3, A5- 57	Case 28: Traumatic hyphema				
29	A1-4, A6-9, A14-, A16- 20, A24 -29, A29- 46, A46 - 56, A54 -68, A67-79 A1-3, A5- 57	Case 29: Chemical injury				
30	A1-4, A6-9, A14-, A16- 20, A24 -29, A29- 46, A46 - 56, A54 -68, A67-79 A1-3, A5- 57	Case 30: Lid tumor				
		Total				35

***Date is recorded in the timetable**

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Portfolio

No.	Week number	Task to be recorded in the portfolio	Quiz Case Based MCQs	Formative assessment
1.		• Construct an accurate and complete ocular history: - Ocular - History of presenting complaint (Onset/duration) - Past ocular history - Past medical history - Drug history - Social history • Measure visual acuity with and without correction and with a pinhole. Case 1: Routine eye exam	Answer the quiz of each lecture in this week (e-Learning).	
2.		• Inspect position of the eyelids • Identify signs of lid swelling and inflammation. • Examine the anterior segment by Penlight, including upper lid eversion. • Demonstrate Ptosis evaluation. Case 2: Hordeolum	Answer the quiz of each lecture in this week (e-learning).	
3.		• Identify signs of ocular allergy. • Identify conjunctival degenerations (Pterygium, Pinguecula) • Examine the anterior segment by Penlight, including upper lid eversion. • Inspect the conjunctiva, anterior segment with a penlight. Case 3: Allergic conjunctivitis	Answer the quiz of each lecture in this week (e-learning).	
4.		• Summarize the evaluation of patient with epiphora (congenital and acquired) ○ How to perform lacrimal sac massage & regurge test ○ How to perform lacrimal syringing and	Answer the quiz of each lecture in this week (e-learning).	Attend and pass the formative exam at the end of the week

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		probing and interpretation of results ○ Inspect medial canthal region • Review demonstrative videos of intubation and DCR surgery • Summarize the evaluation of patient with dry eye ○ How to perform and interpret Schirmer test ○ How to perform and interpret tear film break up time Case 4: Acute dacryocystitis		
5.		• Detection of corneal epithelial defect using fluorescein stain. • Differentiation between different types of corneal ulcers. • Explain methods of treatment of corneal abrasions Case 5: Corneal abrasion	Answer the quiz of each lecture in this week (e-learning).	
6.		• Obtain history to determine risk factors of primary angle closure glaucoma. • Measure visual acuity with near card. • Perform confrontation visual field testing in four quadrants for each eye. • Assess pupillary reaction for RAPD. • Estimate anterior chamber depth with penlight. • Diagnose acute angle closure glaucoma by history and penlight examination. • Recognize signs of optic nerve injury (increased cupping and asymmetric cupping). • Demonstrate different methods for IOP measurement. Case 6: Angle-closure glaucoma	Answer the quiz of each lecture in this week (e-learning).	

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7.		- Summarize the evaluation of patient with cataract. - Examine the lens by direct ophthalmoscopy. - Review videos of different techniques for cataract surgeries. Case 7: Cataract	Answer the quiz of each lecture in this week (e-learning).	
	8.	- Describe methods and instruments used for examining uveal tract - Take and record a structured patient centered history - Perform preliminary basic ocular examination appropriate to age in acute and chronic uveal disorders especially identifying pupillary reflexes Case 8: Sympathetic ophthalmitis		
9.		- Make use of Exophthalmometry to diagnose Exophthalmos. - Describe methods and instruments used for assessment of ocular motility in health and disease. - Take and record a structured patient centered history Case 9: dysthyroid ophthalmopathy	Answer the quiz of each lecture in this week (e-learning).	Attend and pass the formative exam at the end of the week
10.		- Describe Abnormal anatomy with signs and symptoms of conditions that associated with important cause of visual loss such as CRAO, CRVO and DR - Identify Layers of retina (10 layers) - Describe symptoms suggestive of vitreoretinal disorders. - Recognize changes in red reflex - Examination of normal eye	Answer the quiz of each lecture in this week (e-learning).	

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		with direct ophthalmoscope. Case 10: Central retinal artery occlusion (CRAO)		
11.		• Demonstrate the clinical features of infectious and non-infectious conjunctivitis • Identify symptoms and signs of conjunctival diseases. • Differentiate between different types of infectious conjunctivitis Case 11: Chlamydial conjunctivitis	Answer the quiz of each lecture in this week (e-learning).	
12.		• Identify exact mechanism of injury, risk factors for globe injury. • Perceive complete ocular examination. • Identify signs diagnostic of open globe injury • Identify how to Exclude intraocular foreign body and endophthalmitis. • Illustrate initial management. • Illustrate complications of chemical injuries. • Illustrate the importance of recognizing chemical injury as a risk for acute vision loss. Case 12: Chemical injury	Answer the quiz of each lecture in this week (e-learning).	
13.		• Examination of normal eye with direct ophthalmoscope • Recognize the normal appearance of red reflex • Describe abnormalities that may affect the appearance of red reflex • Describe symptoms suggestive of vitreoretinal disorders. • Learn how to assess leukocoria and what is the DD. Case 13: Retinal detachment	Answer the quiz of each lecture in this week (e-learning).	Attend and pass the formative exam at the end of the week

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		(RD)		
14.		• Interpret different macular function tests • Identify how recognize FFA. • Identify how to recognize OCT. • Identify normal B- scan. Case 14: Age-related macular degeneration (AMD)	Answer the quiz of each lecture in this week (e-learning).	
15.		• Inspect position of the eyelids. • Examine the anterior segment by Penlight, including upper lid eversion. • Demonstrate differentiation between painless and painful lid swellings. Case 15: Chalazion	Answer the quiz of each lecture in this week (e-learning).	
16.		• Identify signs of different types of allergic conjunctivitis. • Identify conjunctival degenerations (Pterygium, Pinguecula) • Examine the anterior segment by Penlight, including upper lid eversion. • Inspect the conjunctiva, anterior segment with a penlight. Case 16: Allergic conjunctivitis	Answer the quiz of each lecture in this week (e-learning).	
17.		• Summarize the evaluation of patient with epiphora (congenital and acquired) ○ How to perform lacrimal sac massage & regurge test ○ How to perform lacrimal syringing and probing and interpretation of results ○ Inspect medial canthal region • Review demonstrative videos of intubation and DCR surgery • Summarize the evaluation of	Answer the quiz of each lecture in this week (e-learning).	

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		patient with dry eye ○ How to perform and interpret Schirmer test ○ How to perform and interpret tear film break up time Case 17: acute dacryocystitis		
18.		• Detection of corneal epithelial defect using fluorescein stain. • Differentiation between different types of corneal ulcer according to etiology. • Explain method for testing corneal sensation Case 18: Corneal ulcer	Answer the quiz of each lecture in this week (e-learning).	
19.		• Obtain history to determine risk factors of primary open angle glaucoma. • Measure visual acuity with near card. • Perform confrontation visual field testing in four quadrants for each eye. • Assess pupillary reaction for RAPD. • Estimate anterior chamber depth with penlight. • Diagnose acute angle closure glaucoma by history and penlight examination. • Recognize signs of optic nerve injury (increased cupping and asymmetric cupping). • Demonstrate different methods for IOP measurement. Case 19: Open-angle glaucoma	Answer the quiz of each lecture in this week (e-learning).	Attend and pass the formative exam at the end of the week
20.		• Summarize the evaluation of patient with cataract. • Examine the lens by direct ophthalmoscopy. • Review videos of different techniques for cataract surgeries and its complications Explain signs of intraocular inflammation and infection. Case 20: postoperative	Answer the quiz of each lecture in this week (e-learning).	

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		endophthalmitis		
21.		• Obtain history to causes of acute vision loss. • Measure visual acuity and assess color vision. • Perform confrontation visual field testing in four quadrants for each eye. • Assess pupillary reaction for RAPD. Case 21: Optic neuritis	Answer the quiz of each lecture in this week (e-learning).	
22.		• Describe methods and instruments used for examining uveal tract • Take and record a structured patient centered history • Perform preliminary basic ocular examination appropriate to age in acute and chronic uveal disorders especially identifying pupillary reflexes Case 22: Sympathetic ophthalmitis		
23.		• Describe methods and instruments used for assessment of ocular motility in health and disease. • Take and record a structured patient centered history • Perform preliminary basic ocular examination appropriate to age in ocular motility disorders and strabismus especially assessment of ocular motility, cover tests and measurement of visual acuity in children. Case 23: Infantile esotropia	Answer the quiz of each lecture in this week (e-learning).	
24.		• Examination of normal eye with direct ophthalmoscope • Recognize the normal appearance of red reflex • Describe abnormalities that may affect the appearance of red reflex • Describe symptoms suggestive of vitreoretinal disorders.	Answer the quiz of each lecture in this week (e-learning).	

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		Learn how to assess leukocoria and what is the DD. Case 24: Leukocoria		
25.		- Measure pupillary size - Interpret pupillary reaction to light. - Measure the degree of ocular deviation - Interpret the possible abnormalities of ocular motility. - Explain the different causes of nerve palsies Case 25: 4th nerve palsy	Answer the quiz of each lecture in this week (e-learning).	Attend and pass the formative exam at the end of the week
26.		- Identify exact mechanism of injury, Risk factors for open globe injury. - Perceive complete ocular examination. - Identify signs diagnostic of open globe injury - Identify how to Exclude intraocular foreign body and endophthalmitis. - Explain indications of CT scan and facial X-ray. - Illustrate initial management. - Illustrate complications of ocular injuries. - Illustrate the importance of recognizing chemical injury as a risk for acute vision loss Case 26: Traumatic hyphema	Answer the quiz of each lecture in this week (e-learning).	
27.		- Describe methods and examination techniques for assessment of cases of ocular emergencies including measurement of visual acuity, assessment of the pupils, measurement of intraocular pressure by digital palpation and differentiation between ciliary and conjunctival congestion. - Take and record a structured patient centered history. Case 27: Acute congestive glaucoma	Answer the quiz of each lecture in this week (e-learning).	

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28.		• Summarize the evaluation of patient with cataract. • Examine the lens by direct ophthalmoscopy. • Review videos of different techniques for cataract surgeries and its complications Explain signs of intraocular inflammation and infection. Case 28: Diabetic cataract	Answer the quiz of each lecture in this week (e-learning).	Attend and pass the formative exam at the end of the week
29.		• Detection of corneal epithelial defect using fluorescein stain. • Differentiation between different types of corneal ulcer according to etiology. • Explain method for testing corneal sensation. Case 29: Herpetic keratitis	Answer the quiz of each lecture in this week (e-learning).	
30.		• Inspect position of the eyelids • Identify signs and characters of any swelling. • Examine the anterior segment by Penlight, including upper lid eversion. • Demonstrate Ptosis evaluation. • Examine the draining lymph nodes. Case 30: lid tumor	Answer the quiz of each lecture in this week (e-learning).	

Formative assessment

This is used to monitor student's learning to provide ongoing feedback that can be used by instructors to improve their teaching and by students to improve their learning.

It's given at least once in the form of quizzes that is made available for the students at the E-learning site at the end of the block.

Answers are presented instantly after the attempts and discussed on the students groups or in person with the teaching staff

Questions should be consistent with the level of the final exam. The student's attendance is a condition for entering the summative exams. The electronic or paper achievement file must be used to follow up on the students' evaluation, and its completion is a condition for entering the final exams

Blueprint of the block

No.	List of Topics (Lectures/cases)	Learning outcomes	Weight % From total	Total marks	End of the block	Final written exam
1.	Anatomy and physiology of the eye	A1-4, A6-9, A14, -29, A31- 54, A54 -68, A67-79	2 %	2	--	2
2.	Eye lid	A1-4, A6-9, A14, -29, A31- 54, A54 -68, A67-79	5 %	6	3	3
3.	Conjunctiva	A1-4, A6-9, A14- 25, A24 -29, A31- 46, A46 - 54, A54 -68, A67-79	5 %	5	3	2
4.	lacrimal system	A1-4, A6-9, A14- 25, A24 -29, A31- 46, A46 - 54, A54 -68, A67-79	5 %	5	3	2
5.	Sclera	A1-4, A6-9, A14- 25, A24 -29, A31- 46, A46 - 54, A54 -68, A67-79	3 %	3	2	1
6.	Cornea	A10, A11, A12, A31-K33, A39, A40, A48, A49, A54, A69, A70, A71	7 %	8	5	3
7.	Glaucoma	A1- 6, A9, A13, A15- 20, A20-25, A28- 38, A39-44, A45 - 53, A52, A54 - 68, A67-79	9 %	10	5	5
8.	Cataract	A1-4, A6-9, A14- 25, A24 -29, A29, A30 - 46, A46 - 55, A54 -68, A67-79	7 %	8	4	4
9.	Uveal tract	A1- 6, A9, A13, A15- 20, A20-25, A28- 38, A39-44, A45 - 53, A52, A54 - 68, A67-79	5 %	5	3	2
10.	Orbit	A1-4, A6 -8, A14, A16-20, A31- 46, A46 - 55, A54 -68, A67-79	5 %	6	4	2
11.	Squint	A1-4, A6 -8, A14, A16-20, A31- 46, A46 - 55, A54 -68, A67-79	7.5 %	9	4	5
12.	Retina	A1- 6, A9, A13, A15- 20, A20-25, A28- 38, A39-44, A45 - 53, A52, A54 - 68, A67-79	7.5 %	9		9
13.	Optic nerve	A1-4, A6-9, A14-, A16-20, A24 -29, A29- 46,	3 %	3		3

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		A46 - 56, A54 -68, A67-79				
14.	Neuro-ophthalmology	A1-4, A6-9, A14-, A16-20, A24 -29, A29- 46, A46 - 56, A54 -68, A67-79	5%	5		5
15.	Traumatic Eye Injuries	A1- 6, A9, A13, A15- 20, A20-25; A28- 38, A39-44, A45 - 53, A52, A54 - 68, A67-79	5 %	5		5
16.	Ocular emergencies & medications	A1-4, A6 -8, A14, A16-20, A31- 46, A46 - 54, A54 -68, A67-79	5 %	5		5
17.	Red eye	A1-4, A6 -8, A14, A16-20, A31- 46, A46 - 54, A54 -68, A67-79	5%	5		5
18.	Investigative ophthalmology	A1- 6, A9, A13, A15- 20, A20-25, A28- 38, A39-44, A45 - 53, A52, A54 - 68, A67-79	3 %	3		3
19.	refractive errors	A1-4, A11, A12, A31-A33, A39, A40, A48, A49, A54, A69, A70, A71	3 %	3		3
20.	Ocular tumors	A1-4, A6 -8, A14, A16-20, A31- 46, A46 - 54, A54 -68, A67-79	3 %	3		3
	Total		100%	108	36	72

Weight*= decided according to hours, amounts of information and clinical significance

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	List of skills	Learning Outcomes	Weight*	Number of stations	Marks of OSCE الدور الأول
Skills					
1.	Construct an accurate and complete ocular history.	C1-C13, C15, C16, C18-21. C23, C27, C30-34, C36, C38-C43-, C45 - 65 A1-10,12-A55	5 %	1	2.5
2.	Examine the anterior segment by Penlight, including upper lid eversion.	C1-C13, C15, C16, C18-21. C23, C27, C30-34, C36, C38-C43-, C45 - 65 A1-10,12-A55	5 %	1	2.5
3.	Identify signs of previous trachomatous infection and identify conjunctival degenerations (Pterygium, Pinguecula)	C1-C13, C15- -27, C30-36, C38-C64 A1-10,12-A55 A1-10,12-A55	7.5 %	1	4
4.	Identify patients with epiphora (congenital and acquired), and dacryocystitis and know how to perform lacrimal sac massage and regurge test.	C1-C13, C15- -27, C30-36, C38-C64 A1-10,12-A55 A1-10,12-A55	5 %	1	2.5
5.	- Detection of corneal epithelial defect using fluorescein stain and identifying corneal ulcers. - Differentiation between different types of lenses used for correction of	C1-C13, C15- -27, C30-36, C38-C64 A1-10,12-A55	10 %	1	5.5

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	refractive errors.				
6.	- Perform confrontation visual field testing in four quadrants for each eye and assess pupillary reaction for RAPD. - Recognize signs of optic nerve injury (increased cupping), and demonstrate different methods for IOP measurement.	C1-C13, C15- -27, C30-36, C38- -C64 A1-10,12-A55 A1-10,12-A55	7.5 %	1	4
7	- Evaluation and identifying of patient with cataract. - Examine the lens by pen light and direct ophthalmoscopy.	C18-20, C29 A1-10,12-A55	10 %	1	5.5
8	- Take and record a structured patient centered history - Perform preliminary basic ocular examination appropriate to age in acute and chronic uveal disorders especially identifying pupillary reflexes and pupillary synechiae	C1-C13, C15- -27, C30-36, C38- -C64 A1-10,12-A55 A1-10,12-A55	5 %	1	2.5

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9	• Make use of Exophthalmometry to diagnose Exophthalmos. • Describe different imaging modalities of orbit. • Describe methods • Take and record a structured patient centered history • Perform preliminary basic ocular examination appropriate to age in ocular motility disorders and strabismus especially assessment of ocular motility, cover tests and measurement of visual acuity in children.	C1-C13, C15, C16, C21, C23, C28, C30- 34, C38- 65 A1-21, 23 – 57	7.5 %	1	4
10	• Identify Normal appearance and function of retina • Describe Abnormal anatomy with signs and symptoms of conditions that associated with important cause of visual loss such as CRAO, CRVO and DR • Identify Layers of retina (10	C18-20, C29 A1-10,12-A55	10 %	1	5.5

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	- layers) • Recognize changes in red reflex • Examination of normal eye with direct ophthalmoscope • How to assess leukocoria and what is the DD.				
1	• Measure pupillary size • Interpret pupillary reaction to light. • Explain the direct and consensual pupillary reaction. • Identify the principle and the technique of determining the peripheral visual field by finger counting confrontation technique.	C1-C13, C15-17, C21-27, C30-34, C36, S37-50, C51-65 A1-10, 12-21, 23-57	5 %	1	3
1	• Identify exact mechanism of injury, Risk factors for open globe injury. • Evaluate associated facial/orbital injuries. • Perform complete ocular examination . • Identify signs diagnostic of open globe injury		7.5 %		4

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	• Identify how to Exclude intraocular foreign body and endophthalmitis. • Explain indications of CT scan and facial X-ray .				
1	• Describe methods and examination techniques for assessment of cases of ocular emergencies including measurement of visual acuity, assessment of the pupils, measurement of intraocular pressure by digital palpation and differentiation between ciliary and conjunctival congestion. • Take and record a structured patient centered history	C12, C18, C19, S20, C29, C36 A4	10 %		6
1	• Identification of FFA and its indications. • Identification of OCT and its indications. • Identify procedure of B-scan.		5 %		2.5
	Total		100%		54

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دور ثاني

Exam	Final (60%)	Practical (40%)	Total(100%)
	108 marks 75%MCQ (81 marks) 25 % Short answer and Modified Essay Questions (27 marks)	72 marks	180 marks

	List of skills	Learning Outcomes	Weight*	Number of stations	Marks of OSCE الدور الثاني
Skills					
	Construct an accurate and complete ocular history.	C1-C13, C15, C16, C18-21. C23, C27, C30-34, C36, C38-C43-, C45 - 65 A1-10,12-A55	5 %	1	3.5
	Examine the anterior segment by Penlight, including upper lid eversion.	C1-C13, C15, C16, C18-21. C23, C27, C30-34, C36, C38-C43-, C45 - 65 A1-10,12-A55	5 %	1	3.5
	Identify signs of previous trachomatous infection and identify conjunctival degenerations (Pterygium, Pinguecula)	C1-C13, C15- - 27, C30-36, C38-C64 A1-10,12-A55 A1-10,12-A55	7.5 %	1	5.5
	Identify patients with epiphora (congenital and acquired), and dacryocystitis and know how to perform lacrimal sac massage and regurge test.	C1-C13, C15- - 27, C30-36, C38-C64 A1-10,12-A55 A1-10,12-A55	5 %	1	3.5

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15.	- Detection of corneal epithelial defect using fluorescein stain and identifying corneal ulcers. - Differentiation between different types of lenses used for correction of refractive errors.	C1-C13, C15- -27, C30-36, C38- -C64 A1-10,12-A55	10 %	1	7
16.	- Perform confrontation visual field testing in four quadrants for each eye and assess pupillary reaction for RAPD. - Recognize signs of optic nerve injury (increased cupping), and demonstrate different methods for IOP measurement.	C1-C13, C15- -27, C30-36, C38- -C64 A1-10,12-A55 A1-10,12-A55	7.5 %	1	5.5
17.	- Evaluation and identifying of patient with cataract. - Examine the lens by pen light and direct ophthalmoscopy.	C18-20, C29 A1-10,12-A55	10 %	1	7
18.	- Take and record a structured patient centered history - Perform preliminary basic ocular examination appropriate to age in acute and chronic uveal	C1-C13, C15- -27, C30-36, C38- -C64 A1-10,12-A55 A1-10,12-A55	5 %	1	3.5

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	disorders especially identifying pupillary reflexes and pupillary synechiae				
1	• Make use of Exophthalmometry to diagnose Exophthalmos. • Describe different imaging modalities of orbit. • Describe methods • Take and record a structured patient centered history • Perform preliminary basic ocular examination appropriate to age in ocular motility disorders and strabismus especially assessment of ocular motility, cover tests and measurement of visual acuity in children.	C1-C13, C15, C16, C21. C23, C28, C30- 34, C38- 65 A1-21, 23 – 57	7.5 %	1	5.5
2	• Identify Normal appearance and function of retina • Describe Abnormal anatomy with signs and symptoms of conditions that	C18-20, C29 A1-10,12-A55	10 %	1	7

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	associated with important cause of visual loss such as CRAO, CRVO and DR • Identify Layers of retina (10 layers) • Recognize changes in red reflex • Examination of normal eye with direct ophthalmoscope • How to assess leukocoria and what is the DD.				
2	• Measure pupillary size • Interpret pupillary reaction to light. • Explain the direct and consensual pupillary reaction. • Identify the principle and the technique of determining the peripheral visual field by finger counting confrontation technique.	C1-C13, C15-17, C21-27, C30-34, C36, S37 – 50, C51-65 A1-10, 12-21, 23 – 57	5 %	1	3.5
2	• Identify exact mechanism of injury, Risk factors for open globe injury. • Evaluate associated facial/orbital injuries. • Perform		7.5 %		6

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	complete ocular examination . •Identify signs diagnostic of open globe injury •Identify how to Exclude intraocular foreign body and endophthalmitis. •Explain indications of CT scan and facial X-ray .				
2	•Describe methods and examination techniques for assessment of cases of ocular emergencies including measurement of visual acuity, assessment of the pupils, measurement of intraocular pressure by digital palpation and differentiation between ciliary and conjunctival congestion. •Take and record a structured patient centered history	C12, C18, C19, S20, C29, C36 A4	10 %		7
2	• Identification of FFA and its indications. • Identification of OCT and its indications.		5 %		4

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	• Identify procedure of B-scan.				
	Total		100%		72

Lecture Outlines

Lecture (1)

Anatomy and physiology

Specific learning Objectives

By the end of the lecture the student will be able to:

1. To know the anatomy and functions of different structures in the eye.
2. Identify the aqueous humor pathway
3. To know the anatomy and functions of eyelid, lacrimal apparatus, and extraocular muscles.
4. Identify the mechanism of miosis, mydriasis and pathway of pupillary light reflex.

Contents:

- **Anatomy of the globe**
 - Layers and segments of the eye
 - Cornea (layers and function)
 - Sclera (function)
 - Iris, ciliary body and choroid (anatomy and function)
 - Retina (Layers, optic disc and macula)
 - Lens (anatomy and function)
 - Aqueous humor (function, pathway of aqueous outflow)
 - Vitreous humor (function)
 - Vasculature and innervation
- **Orbit**
 - Walls of the orbit
 - Openings of the orbit
- **Eyelid** (structure and muscles)
- **Lacrimal apparatus**
 - Composition of tear fluid
 - Lacrimal gland
 - Tarsal glands
 - Lacrimal sac
 - Nasolacrimal duct
 - Pathway of tears
- **Extraocular muscles**
 - Origin, insertion, function and innervation
- **History taking**
- **Different methods of anterior and posterior segment examination**
- **Intraocular pressure assessment**

Lectures (2)

Eye lid

Specific learning Objectives:

By the end of the lecture the student will be able to:

Classify blepharitis.

Explain lash abnormality, entropion, ectropion and ptosis and the principles of surgical correction.

Identify how to diagnose and manage chalazion.

Contents

Applied Anatomy of the Eyelids

Congenital Anomalies of the Eyelids

Inflammations of the eyelid margin (blepharitis)

- Definition
- Etiology
- Classification
- Clinical features
- Diagnostics
- Treatment
- Complications

Inflammations of the lid glands (chalazion)

- Definition
- Etiology
- Clinical features
- Diagnostics
- Treatment

Anomalies of lid position (Ptosis)

- Definition
- Etiology
- Clinical features
- Diagnosis
- Treatment
- Complications

(Ectropion)

- Definition
- Etiology
- Clinical feature
- Treatment

Anomalies of lid margin position (Entropion)

- Definition
- Etiology
- Clinical feature
- Treatment

Lecture (3) Cornea

Specific learning Objectives:

By the end of the lecture the student will be able to:

1. Illustrate the clinical picture of different types of keratitis and its treatment.
2. Outline the clinical picture of keratoconus and its management.
3. Identify indications of keratoplasty.
4. Know the types of refractive errors and its correction.

Content:

Cornea

- [1] Applied Anatomy of the Cornea
- [2] Physiology of the Cornea
- [3] Congenital Anomalies of the Cornea
- [4] General Signs of Corneal Disease
- [5] Investigations of Corneal Disease
- [6] Corneal Inflammations (Keratitis)
- [7] Corneal Degenerations
- [8] Corneal Ectatic Conditions (Keratoconus)
- [9] Peripheral corneal thinning & ulceration
- [10] Corneal Surgery

Lecture (4) Uveal tract

Specific learning Objectives

By the end of the lecture the student will be able to:

- 1- Describe the normal structure and function of parts of the uveal tract
- 2- Describe common diseases and sight threatening conditions involving the uveal tract
- 3- Describe systemic diseases and conditions associated with uveal tract diseases
- 4- Define the principles of management and compose an initial plan for management of common uveal tract disorders
- 5- Describe the normal structure and function of parts of the uveal tract
- 6- Describe common diseases and sight threatening conditions involving the uveal tract
- 7- Describe systemic diseases and conditions associated with uveal tract diseases

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- 8- Define the principles of management and compose an initial plan for management of common uveal tract disorders

Contents:

- [1] Applied Anatomy of Uveal Tract
 - 1. Anatomy of the iris
 - 2. Anatomy of ciliary body
 - 3. Anatomy of choroid
- [2] Congenital Anomalies of Uveal Tract
- [3] Inflammation of Uveal Tract (Uveitis)
 - Definition
 - Etiology
 - Symptoms
 - Signs
 - Complications
 - Management

Lecture (5) Conjunctiva

Specific learning Objectives:

By the end of the lecture the student will be able to:

- 1. Demonstrate the clinical features of infectious and non-infectious conjunctivitis
- 2. Identify symptoms and signs of conjunctival diseases.
- 3. Differentiate between bacterial and viral conjunctivitis.
- 4. Differentiate, diagnose, and manage all types of allergic conjunctivitis?
- 5. Identify non infectious conjunctival diseases (pinguecula, pterygium, and subconjunctival haemorrhage).

Contents:

Applied anatomy of the conjunctiva

Symptoms and signs of conjunctival diseases

Viral conjunctivitis

- Epidemiology
- Etiology
- Clinical pictures

Bacterial conjunctivitis

- Etiology
- Diagnosis
- Treatment

Trachoma

- Etiology
- Epidemiology
- Clinical features
- Diagnosis
- Treatment/Prevention

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- Prognosis

Noninfectious conjunctival conditions (Allergic conjunctivitis)

- Epidemiology
- Subtypes and key features
- Clinical features
- Treatment

Conjunctival degenerations (pingecula, pterygium)

Lecture (6)

Sclera

Specific learning Objectives:

By the end of the lecture the student will be able to:

1. Identify and manage inflammation of the sclera
2. Summarize staphyloma and its types

Contents

1. Applied Anatomy of the sclera
2. Inflammations of the sclera
3. Degenerations of the sclera
4. Blue sclera

Lecture (7)

Lacrimal system

Specific learning Objectives:

By the end of the lecture the student will be able to:

5. Outline causes, signs and symptoms of watery eye.
6. Summarize the evaluation of patient with epiphora (congenital and acquired).
7. Identify principles of intubation and DCR surgery.
8. Outline causes of lacrimal gland swelling and differentiated between benign and malignant lacrimal gland tumours.
9. Identify Sjogren syndrome and summarize its investigations.

Contents:

5. **Applied Anatomy of Lacrimal System:**
 - (A) Applied Anatomy of Lacrimal Secretory System
 - (B) Applied Anatomy of Lacrimal Drainage System
6. **Applied Physiology of the Lacrimal System:**
 - (A) Applied Anatomy of Lacrimal Secretory System
 - (B) Applied Anatomy of Lacrimal Drainage System
7. **Disorders of the Lacrimal Secretory System**
 - (A) Dry eye syndrome
 - (B) Inflammation of lacrimal gland (Dacryoadenitis)
8. **Disorders of the Lacrimal Drainage System**

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- (A) Watering of the eye (Epiphora)
 - (B) Inflammation of lacrimal sac (Dacryocystitis)
9. **Operations of the Lacrimal System**

Lecture (8) Glaucoma

Specific learning Objectives:

1. **By the end of the lecture the student will be able to:** Define glaucoma
2. Illustrate tonometry, gonioscopy, ONH evaluation, perimetry
3. Classify glaucoma
4. Illustrate clinical picture of 1ry OAG
5. Illustrate clinical picture of 1ry CAG
6. Outline medical treatment of glaucoma
7. Summarize congenital glaucoma

Contents:

GLAUCOMA

[I] Applied Anatomy & Physiology

[II] Glaucoma:

(A) Definition of Glaucoma

(B) Classification & Clinical Types of Glaucoma

(i) Congenital (Infantile) Glaucoma:

a. Primary

b. Secondary

(ii) Adult Glaucoma:

a. Primary: OAG & ACG

b. Secondary: OAG & ACG

(C) Treatment of Glaucoma:

a. Medical treatment

b. Laser treatment

c. Surgical treatment

Lectures (9) Lens diseases

Specific learning Objectives:

By the end of the lecture the student will be able to:

1. Outline the etiology, classification, and diagnosis of cataract as a cause of decreased visual acuity.
2. Identify principles of cataract surgery.

Contents:

[1] Applied anatomy of crystalline lens

[2] Congenital anomalies of the lens

[3] Cataract

1. Classification
2. Clinical features
3. Diagnosis
4. Treatment
5. Surgery

[4] Displacement of crystalline lens (Ectopia Lentis)

Lecture (10) Neuro-ophthalmology

Specific learning Objectives:

By the end of the lecture the student will be able to:

- Detect visual pathway, lesions of visual pathway.
- Identify diseases cause lesions of visual pathway.
- Identify causes and management of optic neuritis.
- Diagnose of multiple sclerosis as a main cause of optic neuritis.
- Detect causes and management of papilledema.

Contents:

- [1] anatomy of the visual pathway
- [2] Visual pathway lesions
- [3] Pupil
- [4] Ocular manifestations of brain tumors
- [5] Causes of miosis & mydriasis

Lecture (11) Retina

Specific learning Objectives:

By the end of the lecture the student will be able to:

1. Identify importance of retina including macula and optic nerve
2. Identify classification and treatment of diabetic retinopathy
3. Describe symptoms, signs and treatment of retinal detachment
4. Describe Features of retinal vascular diseases

Contents:

[1] **Applied anatomy of the retina**

[2] **Fundus Examination**

[3] **Investigations of retinal diseases**

[4] **Retinal Diseases:**

• **Retinal Vascular Disorders (Vascular Retinopathies)**

- ▣ Diabetic Retinopathy
- ▣ Retinal Vein Occlusion
- ▣ Retinal Artery Occlusion
- ▣ Hypertensive Retinopathy

• **Hereditary Disorders of the Retina**

- ▣ Retinitis Pigmentosa
- ▣ Albinism

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- **Acquired maculopathies**
 - Age-related macular degeneration (AMD)
 - Cystoid macular edema
 - Myopic maculopathy
- **Retinal detachment (RD)**
 - Rhegmatogenous RD
 - Tractional RD
 - Exudative RD

Lecture (12) Optic nerve

Specific learning Objectives:

By the end of the lecture the student will be able to:

- Detect visual pathway, lesions of visual pathway.
- Identify causes and management of optic neuritis.
- Diagnose of multiple sclerosis as a main cause of optic neuritis.
- Detect causes and management of papilledema.

Contents:

- 1- Applied Anatomy of the Optic Nerve
- 2- Papilledema
- 3- Optic Nerve Inflammations (Optic Neuritis):
 - (A) Papillitis
 - (B) Retrobulbar Neuritis
- 4- Optic Atrophy

Lectures (13) Orbit

Specific learning Objectives:

By the end of the lecture the student will be able to:

3. To understand the symptoms, signs, causes and investigations of dysthyroid ophthalmopathy
4. Identify and manage orbital infections and cavernous sinus thrombosis
5. Identify proptosis
6. Summarize orbital infections and inflammations

Contents

- a. Applied Anatomy of the Orbit
- b. Congenital Anomalies of the Orbit
- c. Proptosis
- d. Orbital Infections
- e. Orbital Inflammations

Orbital Surgery

Lecture (14) Squint

Specific learning Objectives:

By the end of the lecture the student will be able to:

1. To understand the symptoms, signs, causes and investigation of thyroid-associated orbitopathy.
2. Identify and manage orbital infections and cavernous sinus thrombosis.
3. Identify proptosis.
4. Identify rhabdomyosarcoma
5. Describe the normal structure and function of different extraocular muscles and the physiology ocular motility.
6. Describe common diseases and involving the ocular motor mechanisms
7. Identify Functional sensory and motor consequences of strabismus
8. Define the principles of management and compose an initial plan for management of strabismus

Contents:

- [1] Anatomy of Extraocular muscles
- [2] Physiology of Extraocular muscles
- [3] Orthophoria
- [4] Strabismus
 - (A) Definition of Strabismus
 - (B) Clinical Classification of Strabismus
 - (C) Clinical Types of Strabismus

Lecture (15) Refractive errors

Specific learning Objectives:

By the end of the lecture the student will be able to:

1. Illustrate the clinical picture of different types of refractive errors.
2. Know the different methods of correction of refractive errors.

Contents:

- [1] The normal state of refraction (Emmetropia)
- [2] Ametropia (Errors of refraction):
 - (A) Spherical Errors: 1. Myopia 2. Hypermetropia
 - (B) Astigmatism
- [3] Aphakia
- [4] Anisometropia
- [5] Accommodation & Presbyopia

Lecture (16) D.D of red eye

Specific learning Objectives:

By the end of the lecture the student will be able to:

- Illustrate the different causes of red eye.

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- Discuss clinical picture of common causes of red eye.

Contents:

- D.D of red eye
- Clinical picture of common disorders causing red eye

Lectures (17) Investigative ophthalmology

Specific learning Objectives:

By the end of the lecture the student will be able to:

1. Identify indications, normal, and abnormal findings of FFA.
2. Identify clinical significance, and abnormal findings of OCT.
3. Detect uses of B-scan

Contents:

Fluorescein angiography

- Definition
- Indications
- Procedure
- Abnormal findings
- Clinical significance

Optical coherence tomography

- Definition
- Indications
- Abnormal findings
- Clinical significance

Electroretinogram

- Definition
- Indications
- Types
- Clinical significance

B-scan ultrasound

Indications

Visual Field

- Definition
- Indications
- Types

Lectures (18) Traumatic Eye Injuries

Specific learning Objectives:

By the end of the lecture the student will be able to:

1. Outline the effect of trauma on the orbit.
2. Outline closed globe injury (blunt trauma).
3. Explain features and management of open globe injury.
4. Summarize management of chemical injury.
5. Explain effect of blunt trauma (on cornea, uvea, lens, retina, ON, globe rupture).

Contents

- [1] Blunt Ocular Trauma
- [2] Penetrating Ocular Trauma
- [3] Ocular Injuries by Foreign Bodies
- [4] Chemical Ocular Injuries
- [5] Radiation Ocular Injuries
- [6] Thermal Ocular Injuries
- [7] Blow-out Fracture of the Orbit
- [8] Shaken Baby Syndrome

Lecture (19) Ocular tumors

Specific learning Objectives:

By the end

1. Identify classification of ocular tumors
2. Summarize the common ocular tumors

Contents:

Classification of Eye Tumors

- [1] Extraocular Tumors
- [2] Intraocular Tumors
- [3] Orbital Tumors

Common Eye Tumors:

- (1) Demoid cyst
- (2) Capillary hemangioma
- (3) Basal cell carcinoma of the eyelid
- (4) Malignant melanoma of the choroid
- (5) Retinoblastoma

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Lectures (20)

Ocular emergencies

Specific learning Objectives:

By the end of the lecture the student will be able to:

- 1- Describe common diseases that cause serious sight threatening ocular emergencies.
- 2- Describe differential diagnosis of the major symptoms of different ocular emergencies and define the signs that differentiate between different causes of those alarming symptoms.
- 3- Define the principles of management and compose an initial plan for management of different

Contents:

Acute vision Loss:

1. Central retinal artery occlusion
2. Retinal detachment
3. Central retinal vein occlusion
4. Acute congestive glaucoma

Outlines of topics for self-directed learning and case - based discussions

Case 1: Routine eye examination

Specific learning Objectives:

By the end of case discussion, the student will be able to:

1. Integrate skills of history taking and ocular examination.
2. Interpret the results of history, physical examination, and laboratory findings into a meaningful diagnostic formulation.

Case 2: Hordeolum

Specific learning Objectives:

By the end of the lecture the student will be able to:

- 1- Integrate the results of history, physical examination and laboratory test findings into a meaningful diagnostic formulation.
2. Construct appropriate management regarding a case with hordeolum.

Case 3: Blepharitis

Specific learning Objectives:

By the end of the lecture the student will be able to:

- 1- Integrate the results of history, physical examination and laboratory test findings into a meaningful diagnostic formulation.
2. Construct appropriate management regarding a case with blepharitis.

Case 4: Corneal abrasion

Specific learning objectives:

By the end of case discussion, the student will be able to:

1. Integrate the results of history, physical examination and laboratory findings into a meaningful diagnostic formulation.
2. Construct appropriate management regarding a case with corneal abrasion.

Case 5: Corneal ulcer

Specific learning Objectives:

By the end of the lecture the student will be able to:

1. Integrate the results of history, physical examination and laboratory test findings into a meaningful diagnostic formulation.
2. Construct appropriate management regarding a case with corneal ulceration.

Case 6: Herpetic keratitis

Specific learning objectives:

By the end of case discussion, the student will be able to:

1. Integrate the results of history, physical examination and laboratory findings into a meaningful diagnostic formulation.
2. Select the appropriate investigations.
3. Construct appropriate management regarding a case with herpetic keratitis.

Case 7: Sympathetic ophthalmitis

Specific learning objectives:

By the end of case discussion, the student will be able to:

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1. Integrate the results of history, physical examination and laboratory findings into a meaningful diagnostic formulation.
2. Select the appropriate investigations.
3. Construct appropriate management regarding a case uveitis.

Case 8: Chlamydial conjunctivitis

Specific learning objectives:

By the end of case discussion, the student will be able to:

1. Integrate the results of history, physical examination and laboratory findings into a meaningful diagnostic formulation.
2. Select the appropriate investigations.
3. Construct appropriate management regarding a case with trachoma.

Case 9: Allergic conjunctivitis

Specific learning Objectives:

By the end of case discussion, the student will be able to:

1. Integrate the results of history, physical examination, and laboratory findings into a meaningful diagnostic formulation.
2. Select the appropriate investigations.
3. Construct appropriate management regarding a case with allergic conjunctivitis

Case 10: Allergic conjunctivitis

Specific learning Objectives:

By the end of case discussion, the student will be able to:

1. Integrate the results of history, physical examination, and laboratory findings into a meaningful diagnostic formulation.
2. Select the appropriate investigations.
3. Construct appropriate management regarding a case with allergic conjunctivitis

Case 11: Acute dacryocystitis

Specific learning objectives:

By the end of case discussion, the student will be able to:

1. Integrate the results of history, physical examination and laboratory findings into a meaningful diagnostic formulation.
2. Select the appropriate investigations.
3. Construct appropriate management regarding a case with acute dacryocystitis.

Case 12: Open angle glaucoma

Specific learning objectives:

By the end of case discussion, the student will be able to:

1. Integrate the results of history, physical examination and laboratory findings into a meaningful diagnostic formulation.
2. Select the appropriate investigations.
3. Construct appropriate management regarding a case with open-angle glaucoma.

Case 13: Angle-closure glaucoma

Specific learning objectives:

By the end of case discussion, the student will be able to:

1. Integrate the results of history, physical examination and laboratory findings into a meaningful diagnostic formulation.
2. Select the appropriate investigations.
3. Identify the risk factors for a case with angle closure glaucoma.

Case 14: Acute congestive glaucoma

Specific learning objectives:

By the end of case discussion, the student will be able to:

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1. Integrate the results of history, physical examination and laboratory findings into a meaningful diagnostic formulation.
2. Select the appropriate investigation
3. Construct appropriate management regarding a case with acute congestive glaucoma.

Case 15: Cataract

Specific learning objectives:

By the end of case discussion, the student will be able to:

1. Integrate the results of history, physical examination and laboratory findings into a meaningful diagnostic formulation.
2. Select the appropriate investigations.
3. Construct appropriate management regarding a case with cataract.

Case 16: Diabetic cataract

Specific learning objectives:

By the end of case discussion, the student will be able to:

1. Integrate the results of history, physical examination and laboratory findings into a meaningful diagnostic formulation.
2. Select the appropriate investigations.
3. Construct appropriate management regarding a case with complicated cataract.

Case 17: Postoperative endophthalmitis

Specific learning objectives:

By the end of case discussion, the student will be able to:

1. Integrate the results of history, physical examination and laboratory findings into a meaningful diagnostic formulation.
2. Select the appropriate investigations.
3. Construct appropriate management regarding a case postoperative endophthalmitis.

Case 18: Retinal detachment

Specific learning objectives:

By the end of case discussion, the student will be able to:

1. Integrate the results of history, physical examination and laboratory findings into a meaningful diagnostic formulation.
2. Select the appropriate investigations.
3. Construct appropriate management regarding a case with retinal detachment.

Case 19: Central retinal artery occlusion (CRAO)

Specific learning objectives:

By the end of case discussion, the student will be able to:

1. Integrate the results of history, physical examination and laboratory findings into a meaningful diagnostic formulation.
2. Select the appropriate investigations.
3. Identify the risk factors for CRAO.

Case 20: Age related macular degeneration (AMD)

Specific learning objectives:

By the end of case discussion, the student will be able to:

1. Integrate the results of history, physical examination and laboratory findings into a meaningful diagnostic formulation.
2. Select the appropriate investigations.
3. Construct appropriate management regarding a case with AMD.

Case 21: Optic neuritis

Specific learning objectives:

By the end of case discussion, the student will be able to:

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1. Integrate the results of history, physical examination and laboratory findings into a meaningful diagnostic formulation.
2. Select the appropriate investigations.
3. Construct appropriate management regarding a case with optic neuritis.

Case 22: Papilledema

Specific learning objectives:

By the end of case discussion, the student will be able to:

1. Integrate the results of history, physical examination and laboratory findings into a meaningful diagnostic formulation.
2. Select the appropriate investigations.
3. Construct appropriate management regarding a case with papilledema.

Case 23: Dysthyroid ophthalmopathy

Specific learning objectives:

By the end of case discussion, the student will be able to:

1. Integrate the results of history, physical examination and laboratory findings into a meaningful diagnostic formulation.
2. Select the appropriate investigations.
3. Construct appropriate management regarding a case with dysthyroid ophthalmopathy.

Case 24: Refractive errors

Specific learning objectives:

By the end of case discussion, the student will be able to:

1. Integrate the results of history, physical examination and laboratory findings into a meaningful diagnostic formulation.
2. Select the appropriate investigations.
3. Construct appropriate management regarding a case with refractive error.

Case 25: Infantile esotropia

Specific learning objectives:

By the end of case discussion, the student will be able to:

1. Integrate the results of history, physical examination and laboratory findings into a meaningful diagnostic formulation.
2. Select the appropriate investigations.
3. Construct appropriate management regarding a case with strabismus.

Case 26: Trochlear nerve palsy

Specific learning objectives:

By the end of case discussion, the student will be able to:

1. Integrate the results of history, physical examination and laboratory findings into a meaningful diagnostic formulation.
2. Select the appropriate investigations.
3. Construct appropriate management regarding a case with trochlear nerve palsy.

Case 27: Leukocoria

Specific learning objectives:

By the end of case discussion, the student will be able to:

1. Integrate the results of history, physical examination and laboratory findings into a meaningful diagnostic formulation.
2. Select the appropriate investigations.
3. Construct appropriate management regarding a case with leukocoria.

Case 28: Traumatic hyphema

Specific learning objectives:

By the end of case discussion, the student will be able to:

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1. Integrate the results of history, physical examination and laboratory findings into a meaningful diagnostic formulation.
2. Select the appropriate investigations.
3. Construct appropriate management regarding a case traumatic hyphema.

Case 29: Chemical injury

Specific learning objectives:

By the end of case discussion, the student will be able to:

1. Integrate the results of history, physical examination and laboratory findings into a meaningful diagnostic formulation.
2. Select the appropriate investigations.
3. Construct appropriate management regarding a case with chemical injury.

Case 30: Lid tumor

Specific learning objectives:

By the end of case discussion, the student will be able to:

1. Integrate the results of history, physical examination and laboratory findings into a meaningful diagnostic formulation.
2. Select the appropriate investigations.
3. Identify the risk factors for lid tumors.

Practical sessions outlines

1. Obtain and record informative history.
2. Examine the patients systematically appropriate to the age, gender, and clinical presentation of the patient while being culturally sensitive.
3. Design and /or present a structured, patient centered history and an appropriately timed full physical examination of patients.
4. Integrate the results of history, physical examination, and laboratory test findings into a meaningful diagnostic formulation.
5. Apply measures that promote patient safety.
6. Apply suitable measures for infection control when dealing with the patients and instruments.
7. Construct appropriate management algorithm (both diagnostic and therapeutic) for patients.

Timetable of the block

للفرقه الخامسة لائحة قديمة

Ophthalmology (OPH-523) Study Guide

توزيع المحاضرات والدروس للفرقة الخامسة (المرحلة الإكلينيكية)

مرفق فيل شؤون الطلاب

الخريطة بحسب التواريخ
مرفق فيل شؤون الطلاب