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## Assessment tools for midterm assessment

### Ophthalmology

<b>Curriculum</b>	31.05.01 General Medicine
<b>Specialty</b>	Specialist
<b>Form of education</b>	<b>Full-time</b>
<b>Designer Department</b>	<b>Surgical diseases</b>
<b>Graduate Department</b>	<b>Internal Diseases</b>

### TEST – MEDICAL HISTORY

The test is carried out in order to control the students' assimilation of the knowledge of the lecture course, to evaluate the knowledge and skills acquired during practical training, as well as to test the ability to solve various kinds of tasks that develop professional abilities in accordance with the requirements of the qualification characteristics of a specialist. The test is carried out according to the schedule during the training hours in the amount stipulated by the work program for the discipline and the academic workload of the teacher. The time to prepare for the test is included in the number of hours of independent work of students and should not exceed 4 hours. The test is evaluated with a differentiated assessment. In case of unsatisfactory assessment received by the student, a new deadline for writing the test is set during extracurricular time. (Surgut State University Quality Management System of the QMS of SurGU SRT-2.12.5-15 Organization of ongoing monitoring of academic performance and intermediate certification of students Revision No. 2 p. 7 of 21)

### WRITING A CLINICAL MEDICAL HISTORY

The student independently chooses the nosological form, develops and defends the medical history according to the proposed scheme.

The main stages of writing an educational history:

Title page (separate page)

1. Passport part.
2. Complaints: the main ones and those found during the survey of organ systems.
3. Anamnesis of the main and concomitant diseases.
4. Anamnesis of life.
5. Objective examination data of the patient.
6. Justification of the preliminary diagnosis and its formulation.
7. Examination plan.
8. Laboratory and instrumental research data, consultant conclusions.
9. Final clinical diagnosis (justification and formulation).
10. Differential diagnosis.
11. Patient's treatment and its justification.
12. Forecast.
13. Prevention (primary and secondary).
14. Epicrisis.
15. The curation diary.

## SAMPLE EXAM POINTS

The midterm assessment is conducted in the form of a test with an assessment. The test assignments contain 2 theoretical points and a list of practical skills (+ prescriptions for glasses)

Formulate detailed answers to the following theoretical points:

1. The evolutionary development of the organ of vision. Embryonic development of the human eyeball.
2. Visual analyzer, departments of the visual analyzer.
3. Sclera: anatomical and histological structure, properties, functions, blood supply and innervation.
4. The cornea: anatomical and histological structure, properties, functions, nutrition sources and innervation.
5. The iris: anatomical and histological structure, properties, functions, blood supply and innervation.
6. The ciliary body: anatomical and histological structure, properties, functions, blood supply and innervation.
7. The vascular membrane itself: anatomical and histological structure, properties, functions, blood supply and innervation.
8. Mesh shell: anatomical and histological structure, properties, functions, sources of blood supply and innervation.
9. Lens: anatomical and histological structure, properties, functions, nutrition and innervation.
10. Vitreous body, chambers of the eye: anatomical structure, functions, and power source.
11. The structure of the orbit, the openings of the orbit, nerves and vessels of the orbit. 12. Oculomotor muscles: anatomy, functions, blood supply and innervation.
13. Eyelids: anatomical and histological structure, functions, blood supply and innervation.
14. The mucous membrane of the eye: anatomical and histological structure, properties, functions, blood supply and innervation.
15. Lacrimal organs: anatomical structure, properties, functions, blood supply and innervation.
16. Blood supply to the eyeball and its accessory apparatus. Innervation of the eyeball and orbit.
17. Circulation of watery moisture in the eye, ways of its outflow.
18. Central visual acuity. The concept of visual angle. Objective and subjective methods of visual acuity research.
19. Color perception. Three-component theory of color perception. Properties of chromatic color. Color perception disorders. Classification of color perception disorders. Objective and subjective methods of color perception research.
20. Peripheral vision. The concept of the field of view. Methods of peripheral vision research (static and kinetic perimetry). The normal boundaries of the field of view are white and primary colors.
21. Scotomas. Classification by cattle. Methods of cattle research.
22. Light perception. The essence of the photochemical process (theory of academician P. F. Lazarev). Light and dark adaptation. Twilight vision disorders.
23. Binocular vision. Conditions of existence of binocular vision. Physiological double vision. Methods of binocular vision research.
24. Optical system of the eye: main optical axis, main focus, main plane, main focal length. Physical refraction of the eye.
25. Clinical refraction. Types of clinical refraction. The concept of a further point of clear view. The development of refraction. Objective and subjective methods of clinical refraction research. Anisometropia.
26. Emmetropia, features of visual perception in emmetropia.
27. Myopia, features of visual perception in myopia. Types of myopia. Complications of progressive myopia. Modern ways to correct myopia.
28. Hypermetropia, features of visual perception in hypermetropia. Types of hypermetropia. Complications of hypermetropia. Modern methods correction of hypermetropia.
29. Astigmatism. Types of astigmatism. Modern methods of astigmatism correction.
30. Accommodation. The Helmholtz mechanism of accommodation. The concept of the nearest point of clear vision. The volume and area of accommodation. Convergence and its relation to accommodation. Accommodation disorders.

31. Eyelid development anomalies: clinic, diagnosis, treatment.
32. Inflammatory diseases of the eyelids: clinic, diagnosis, treatment.
33. Diseases of the neuromuscular apparatus of the eyelids (ptosis, blepharospasm, lagophthalmos, inversion, inversion): clinic, diagnosis, treatment.
34. Neoplasms of the eyelids: clinic, diagnosis, treatment.
35. Inflammatory diseases of the conjunctiva. Classification conjunctivitis. Common signs of conjunctivitis. Principles of treatment.
36. Koch-Weeks conjunctivitis: etiology, transmission routes, clinic, diagnosis, treatment, prevention.
37. Pneumococcal conjunctivitis: etiology, transmission routes, clinic, diagnosis, treatment, prevention.
38. Diphtheria conjunctivitis: etiology, transmission routes, clinic, diagnosis, treatment, prevention.
39. Gonoblenorrhoea: etiology, transmission routes, forms, clinic, diagnosis, treatment, prevention.
40. Adenovirus conjunctivitis: etiology, transmission routes, forms, clinic, diagnosis, treatment, prevention.
41. Trachoma: etiology, transmission routes, epidemiology, stages of trachoma, clinic, diagnosis, treatment, prevention. Complications and consequences trachomas and their treatment.
42. Allergic conjunctival diseases: etiology, forms, clinic, diagnosis, treatment, prevention.
43. Dystrophic conjunctival diseases (pterygium, pinguecula): causes, clinic, diagnosis, treatment.
44. Acute dacryoadenitis: etiology, clinic, diagnosis, treatment.
45. Acute and chronic dacryocystitis: etiology, clinic, diagnosis, treatment.
46. Dacryocystitis of newborns: etiology, clinic, diagnosis, treatment methods.
47. Corneal malformations: clinic, diagnosis, treatment.
48. Keratitis. Classification. General symptoms. Outcomes of keratitis. V. P. Filatov's achievements in the treatment of persistent corneal opacities.
49. Purulent corneal ulcer: etiology, clinic, stages, diagnosis, methods of therapeutic and surgical treatment.
50. Tuberculous keratitis: etiology, forms, clinic, diagnosis, methods of treatment.
51. Parenchymal syphilitic keratitis: etiology, clinic, stages, diagnosis, treatment.
52. Herpetic keratitis: etiology, classification, clinic, diagnosis, treatment.
53. Outcomes of corneal diseases. Types of keratoplasty. Keratoprosthetics.
54. Anomalies of vascular tract development: clinic, diagnosis, treatment.
55. Iridocyclitis: etiology, classification, clinic, diagnosis, treatment. The influence of anatomical and physiological features of the uveal tract on the occurrence and course of pathological processes in it.
56. Rheumatic uveitis, herpetic uveitis, uveitis with focal infection, Still's syndrome, Reiter's syndrome, Behcet's syndrome: features of the course, diagnosis and treatment.
57. Complications of uveitis: etiopathogenesis, clinic, diagnosis, treatment.
58. Choroiditis: etiology, classification, forms, clinic, diagnosis, treatment.
59. Uveopathy: etiology, clinic, diagnosis, complications, treatment.
60. Neoplasms of the vascular tract: forms, clinic, diagnosis, modern methods of treatment of tumors of the vascular tract.
61. Lens development anomalies: clinic, diagnosis, treatment.
62. Cataract. Classification of cataracts. Age-related cataract: forms, clinic and diagnosis. Complications of cortical cataract.
63. Modern methods of therapeutic and surgical treatment cataracts. Ways to correct aphakia.
64. Congenital cataract: causes, forms, clinic, diagnosis, treatment features and ways to correct aphakia.
65. Complicated cataract, classification, clinic, diagnosis, treatment. Secondary cataract: etiopathogenesis, clinic, diagnosis, treatment methods.
66. Vitreous body and its pathology.
67. Fundus changes in hypertension: classification, clinic, diagnosis, treatment.
68. Acute obstruction of the central retinal artery: etiopathogenesis, clinic, diagnosis, treatment, prognosis.
69. Thrombosis of the central retinal vein: etiopathogenesis, clinic, diagnosis, treatment, prognosis.
70. Diabetic retinopathy: classification, clinic, diagnosis, modern methods of treatment, prevention of blindness from diabetes.
71. Dystrophic diseases of the retina (pigmented dystrophy, Best's yolk dystrophy, Stargardt's dystrophy, Franceschetti's dystrophy, central senile Kuntz-Junius dystrophy): etiology, clinic, diagnosis, treatment.
72. Retinal detachment: forms, clinic, diagnosis, modern methods of treatment.

73. Retinal phacomatoses (Hippel-Lindau disease, exudative retinitis Coates): causes, clinic, diagnosis, treatment. Retinal neoplasms: clinic, diagnosis, treatment.
74. Anomalies of optic nerve development: clinic, diagnosis, treatment.
75. Optic neuritis: etiology, clinic, diagnosis, treatment. Features of the course of retrobulbar neuritis.
76. Congestive optic disc: clinic, diagnosis, treatment. Ischemic optic neuropathy: causes, etiology, clinic, diagnosis, treatment.
77. Optic nerve atrophy: etiology, forms, clinic, diagnosis, treatment. Differential diagnosis of simple optic nerve atrophy from glaucomatous optic nerve atrophy.
78. Primary glaucoma. Classification. Primary open-angle glaucoma: etiology, theories of occurrence, clinic, diagnosis, methods of therapeutic, laser and surgical treatment.
79. Acute attack of glaucoma: etiology, mechanism of pupillary block, clinic, diagnosis, treatment. Differential diagnosis with acute iridocyclitis. Emergency care for an acute attack of glaucoma.
80. Congenital glaucoma: etiology, clinic, diagnosis, treatment.
81. Prevention of blindness from primary glaucoma. The purpose and objectives of dispensary treatment of glaucoma patients.
82. Friendly strabismus: causes, main signs, clinic, diagnosis, principles of treatment.
83. Paralytic strabismus: causes, main signs, clinic, diagnosis, principles of treatment.
84. Diseases of the orbit (osteoperiostitis, phlegmon of the orbit, neoplasms of the orbit): causes, clinic, diagnosis, treatment.
85. Damage to the organ of vision. Classification of visual organ damage. Damage to the orbit, damage to the eyelids: clinic, diagnosis, treatment.
86. Blunt force trauma to the eye. Pathological changes in the structures of the eye in blunt force trauma. Classification of contusion injuries of the eye. Emergency care for contusions of the eyeball. Further tactics and treatment.
87. Penetrating wounds of the eyeball. Absolute and relative signs of penetrating injury. First aid for penetrating eye injury. X-ray diagnostics. Methods of extraction of intraocular foreign bodies.
88. Complications of penetrating eye wounds: etiopathogenesis, clinic, diagnosis, treatment. Sympathetic inflammation: causes of its occurrence, forms, clinic, diagnosis, prevention, treatment.
89. Eye burns. Classification of eye burns. Emergency care for chemical burns, further tactics and treatment.
90. Frostbite of the eyes. Damage to the eyes with radiant energy. Urgent help, further tactics and treatment.

#### List of practical skills

1. The method of fixing a small child for eye examination.
2. Examination of the conjunctiva of the lower and upper eyelids, inversion of the eyelids.
3. Examination of the lacrimal gland, lacrimal sac, checking the patency of the lacrimal tubules and the lacrimal-nasal canal - tubular and nasal tests.
4. Examination of ophthalmotonus by palpation and tonometer.
5. The method of lateral illumination.
6. The method of passing light.
7. Determination of the sensitivity and integrity of the cornea.
8. Study of central visual acuity.
9. Examination of the boundaries of the visual field (control method and perimeter).
10. The study of color perception using Rabkin tables.
11. Determination of binocular vision by available methods.
12. The subjective method of determining refraction.
13. Correction of hypermetropia, myopia, presbyopia, aphakia.
14. Instilling drops and applying ointments into the conjunctival cavity, rinsing the conjunctival cavity.
15. Massage of eyelids and meibomian glands.
16. Removal of foreign bodies from the conjunctiva and cornea with a swab.
17. First aid for burns and frostbite of the eyes.
18. Application of monocular and binocular aseptic bandages.
19. Prescriptions and medical documentation.

#### List of recipes for glasses

- 1) Write a prescription for glasses to a 30-year-old patient with myopia of both eyes at 3.0D.

- 2) Write a prescription for glasses to a 30-year-old patient with hyperopia of both eyes at 4.5D.
- 3) Write a prescription for glasses to a 35-year-old patient with 2.5D hypermetropia of the right eye and 5.0D hypermetropia of the left eye.
- 4) Write a prescription for glasses to a 20-year-old patient with 4.0D hypermetropia of both eyes.
- 5) Write a prescription for glasses for a 20-year-old patient with 2.5D myopia in both eyes.
- 6) Write a prescription for glasses to a 35-year-old patient with right eye hypermetropia eyes 3.0D, left eye hypermetropia 7.0D.
- 7) Write a prescription for glasses to a 30-year-old patient with myopia of the right eye in 2.0D, with 6.0D myopia of the left eye.
- 8) Write a prescription for glasses to a 25-year-old patient with simple direct myopic astigmatism of both eyes in 1.5D.
- 9) Write a prescription for glasses to an 18-year-old patient with simple direct hypermetropic astigmatism of both eyes in 2.0D.
- 10) Write a prescription for glasses to a 20-year-old patient with simple reverse myopic astigmatism of both eyes in 2.0D.
- 11) Write a prescription for glasses to a 45-year-old patient with emmetropia of both eyes.
- 12) Write a prescription for glasses to a 70-year-old patient with emmetropia of both eyes.
- 13) Write a prescription for glasses to a 65-year-old patient with myopia of both eyes in 3.0D.
- 14) Write a prescription for bifocals to a patient with aphakia who previously had emmetropia of both eyes.
- 15) Write a prescription for bifocals to a patient with aphakia who previously had myopia of both eyes in 4.0 D.
- 16) Write a prescription for bifocals to a 50-year-old patient with 2.0D hypermetropia of the right eye and 6.0D hypermetropia of the left eye.
- 17) Write a prescription for bifocals to a 70-year-old patient with 3.0D hyperopia in both eyes.
- 18) Write a prescription for bifocals to a 50-year-old patient with 5.0D myopia in both eyes.
- 19) Write a prescription for bifocals to a 40-year-old patient with 4.0D hyperopia in both eyes.
- 20) Write out a prescription for bifocals to a 55-year-old patient with 2.5D hypermetropia of both eyes.
- 21) Write out a prescription for bifocals to a patient with aphakia who previously had 2.0D hypermetropia of both eyes.
- 22) Write a prescription for bifocals to a 55-year-old patient with myopia of both eyes at 7.5 D.
- 23) Write a prescription for bifocals to a 45-year-old patient with hyperopia of both eyes at 4.0D.
- 24) Write a prescription for bifocals to a 50-year-old patient with 2.0D hypermetropia of both eyes.
- 25) Write out a prescription for bifocals to a 65-year-old patient with hypermetropia of both eyes in 1.5D