



Doctoral Ophthalmic Anatomy Examination (17/8/2021)

Part I: Answer the following questions:

1- Optic Canal: Position including forming bones; Shape; Measurements; Relations; Passing structures. **(One degree for each item).**

2- Iris: Embryology; Gross anatomy of anterior surface; Minute anatomy & ultrastructure of sphincter pupillae; Minute anatomy & ultrastructure of dilator pupillae; Applied anatomy. **(One degree for each item).**

3- Trigeminal Nerve: Nuclei position; Nuclei Concern; Illustration of nuclei; Relations of trigeminal ganglion; Enumerate nasociliary nerve branches & their distribution **(One degree for each item).**

Part II: Chose the correct answer:

1- Which of the following concerning eyelid is correct?

- (A) Orbital septum is continuous with periosteum at orbital margin.
- (B) Orbital septum lies posterior to medial but anterior to lateral palpebral ligaments.
- (C) Upper tarsal plate measures 5 mm centrally.
- (D) Medial palpebral ligament connects tarsi to posterior lacrimal crest.

2- Regarding conjunctiva which of the following is correct?

- (A) Superior fornix lies 14 mm from limbus.
- (B) Inferior fornix lies 14 mm from limbus.
- (C) Medial fornix lies 14 mm from limbus.
- (D) Lateral fornix lies 14 mm from limbus.

3- Regarding lacrimal system which of the following is correct?

- (A) Lacrimal sac lies in a fossa bounded solely by lacrimal bone.
- (B) Common canaliculus pierces lacrimal sac 5 mm below its apex.
- (C) Common canaliculus lies in front of medial palpebral ligament.
- (D) Orbital part of lacrimal gland is related inferiorly to levator & lateral rectus muscles.

4- Which extraocular muscle has the shortest tendon?

- (A) Medial rectus.
- (B) Lateral rectus.
- (C) Inferior oblique.
- (D) Superior oblique.

5- Which muscle originates in orbital apex above annulus of zinn?

- (A) Superior oblique.
- (B) Superior rectus.
- (C) Medial rectus.
- (D) Lateral rectus.

6- The superior relation of levator palpebrae superioris include the following except?

- (A) Trochlear nerve.
- (B) Frontal nerve.
- (C) Lacrimal nerve.
- (D) Supraorbital artery.

7- Regarding angle of anterior chamber which of the following is correct?

- (A) Scleral spur lies posterior to Schlemm's canal.
- (B) Wall of Schlemm's canal formed of epithelial cells with interrupted basement membrane.
- (C) Trabecular meshwork is drained by aqueous veins.
- (D) Juxtacanalicular tissue invests Schlemm's canal partially.

8- Optic nerve head is supplied mainly by which of the following?

- (A) Central retinal artery.
- (B) Long posterior ciliary arteries.
- (C) Short posterior ciliary arteries.
- (D) Recurrent ciliary arteries.

9- Regarding optic chiasma which of the following is correct?

- (A) It lies at junction of anterior wall & floor of fourth ventricle.
- (B) It has 8 mm in sagittal section.
- (C) It has 20 mm in transverse section.
- (D) Nasal fibres from peripheral retina cross to ipsilateral optic tract.

10- Regarding lateral geniculate nucleus which of the following is correct?

- (A) It serves as relay station in projection of fibres to pretectal nucleus.
- (B) Optic radiation emerges from its ventral aspect.
- (C) It is enfolded by pulvinar of thalamus.
- (D) Fibres from contralateral optic nerve end in layers 2, 3 & 5 of lateral geniculate nucleus.

11- Regarding visual cortex which of the following is correct?

- (A) Calcarine fissure runs from isthmus of cingulate gyrus to posterior pole of occipital lobe.
- (B) Primary visual area lies solely on posterior pole of occipital cortex.
- (C) Primary visual area is formed of 6-laminae which act separately.
- (D) Ganglionic lamina of visual area contains the smallest pyramidal cell somata & numerous stellate cells.

12- Regarding hypophysis cerebri which of the following is correct?

- (A) It lies in pituitary fossa of sella turcica about midway between cribriform plate & foramen magnum.
- (B) Its anterior lobe is connected with fourth ventricle.
- (C) Pars intermedia is part of posterior lobe & separated from it by a narrow cleft.
- (D) Dorsum sellae separate it from basilar artery & pons.

13- Regarding autonomic nerve supply which of the following is correct?

- (A) Vidian nerve is purely parasympathetic nerve.
- (B) Parasympathetic fibres travel in greater petrosal nerve to pterygoid canal.
- (C) Pterygopalatine ganglion receives sensory fibres from ophthalmic nerve.
- (D) Pterygopalatine ganglion branches innervate the eye.

14- Regarding vascular system which of the following is correct?

- (A) Posterior communicating artery supply anterior 1/3 of optic tract.
- (B) Anterior choroidal artery crosses superior to optic tract to reach crus cerebri.
- (C) Ophthalmic artery arises from the third bend of internal carotid artery.
- (D) Basilar artery is formed at upper border of pons by joining of the two vertebral arteries.

15- Regarding vascular system which of the following is correct?

- (A) Vortex veins pierce sclera at equator.
- (B) Superior ophthalmic vein is formed by union of supraorbital & angular veins.
- (C) Foramen lacerum, ovale & rotundum lie lateral to cavernous sinus.
- (D) Abducent nerve lie in lateral wall of cavernous sinus.



Tanta university, faculty of medicine

MD exam, second semester.

August 2021

Ophthalmology department.

Time allowed 3 hours

Optics

Discuss the optical principles, clinical applications, and illustrate with diagrams whenever possible: 5 degrees each

1-Interference of light.

2-Prisms.

3-keratometry

MCQ questions (2 degree each)

1-While doing duocrometeston a myopic patient, the patient reported that he could see the letters in the red half of the chart better than those in the green one, this means that:

- a-He needs adjustment of the optical centers of the glasses.
- b-The glasses overcorrects his myopia.
- c-He needs base down prism addition.
- d-The glasses undercorrects his myopia.

2-The following are true about gonioscopy except:

- a-They neutralize the cornea air interface.
- b-They contain plane mirrors.
- c-Zeisgoniolens is steeper than the cornea.
- d-Goldmangoniolens is steeper than the cornea.

3- The inverted purkinje image is formed by:

- a-The anterior surface of the cornea.
- b-The anterior surface of the lens.
- c-The posterior surface of the cornea.
- d-The posterior surface of the lens.

4-In indirect ophthalmoscopy:

- a-The field of view is larger than the field of illumination.
- b-The field of view is smaller than the field of illumination.
- c-The field of view is equal to the field of illumination.
- d-The field of view is twice the field of illumination.

5-The following are true about laser except:

- a-Uses the principle of constructive interference.
- b-Produces polychromatic non coherent light.
- c-Produces monochromatic coherent light.
- d-contains plane mirrors.

6-The Jackson Cross-Cylinder test, all true except:

- A. involves the principle of placing the circle of least confusion on the retina.
- B. cannot determine the power of the astigmatic correction.
- C. verifies the axis and power of the correcting cylindrical lens.
- D. uses a lens in which the principal powers are equal and opposite in sign.

7-On retinoscopy at a distance of 50 cm, no movement of the red reflex means that the eye is:

- a-Myope 1 diopter.
- b-Myope 2 diopter.
- c-Emmetrope.
- d-Hyperope 1.5 diopters.

8-The original SRK formula is:

- a- $P=A-2.5K-0.9L$
- b- $P=A+2.5K+0.9L$
- c- $P=A-2.5L-0.9K$
- d- $P=A+2.5L+0.9K$

9-For a converging lens, light rays travelling parallel to the principal axis refracts

- a-In line with the principal focus.
- b-Through the secondary focus.
- c-Through the optical center.
- d-Parallel to the principal axis.

he must :

a-Aim above the image of the fish.

b-Aim below the image of the fish.

c-Aim at the image of the fish.

d- Aim behind the fish.

11-Photochromic lenses, all true except:

- A. darken when they contact ultraviolet (UV) light.
- B. take longer to darken than lighten.
- C. are excellent UV absorbers when dark.
- D. absorb about 80% of incident light when maximally darkened.

12. Identify the incorrect response:

- A. as a rule, contact lenses that invert the fundus view roughly double the spot size.
- B. whenever, laser spot size is changed, power must be adjusted.
- C. contact lenses giving direct fundus view (e.g. Goldmann three mirror lens) do not change spot size.
- D. small spots with high power are necessary for treating lesions in the posterior pole.

13. The stenopeic slit, all true except:

- A. acts as a line of pinholes.
- B. can be used to screen for astigmatism.
- C. is most useful in patients who have better than 2/40 (6/12) visual acuity.
- D. is found in most trial lens sets.

14-Visible light, all true except:

- A. wavelengths represent about 1% of the electromagnetic spectrum.
- B. has shorter wavelengths than ultraviolet light.
- C. has shorter wavelengths than radiowaves.
- D. has wavelengths about 400 to 700 nm.

15-An object is placed at 45 cm from a convex lens whose focal length is 15 cm, the image will be:

- a-Smaller, erect and virtual.
- b-Smaller, inverted and real.
- c-The same size, real and inverted.
- d-Smaller, erect and real.

Good luck