



BRAINWARE UNIVERSITY

Term End Examination 2023-2024
Programme – B.Optomety-2022/B.Optomety-2023
Course Name – Ocular Physiology
Course Code - BOPTOC202
(Semester II)

Full Marks : 60

Time : 2:30 Hours

[The figure in the margin indicates full marks. Candidates are required to give their answers in their own words as far as practicable.]

Group-A

(Multiple Choice Type Question)

1 x 15=15

1. Choose the correct alternative from the following :

- (i) Mention the condition that develops due to blockage in the drainage of the aqueous humor.
- | | |
|-----------------------|-------------------------|
| a) Glaucoma | b) Cataracts |
| c) Retinal detachment | d) Macular degeneration |
- (ii) The aqueous humor is reabsorbed into the bloodstream through which of the following structures?
- | | |
|-----------------|------------------------|
| a) Ciliary body | b) Sclera |
| c) Iris | d) Trabecular meshwork |
- (iii) Which of the following is a condition that can result from increased pressure in the eye due to the accumulation of aqueous humor?
- | | |
|-------------------|-------------|
| a) Conjunctivitis | b) Uveitis |
| c) Keratitis | d) Glaucoma |
- (iv) Mention the rate of Aqueous humor production per day.
- | | |
|----------|----------|
| a) 0.5mL | b) 2.5mL |
| c) 5mL | d) 10mL |
- (v) Choose the correct function of the aqueous humor
- | | |
|---|----------------------------|
| a) Providing nutrients to the cornea and lens | b) Removing waste products |
| c) Maintaining the shape of the eye | d) All of the above |
- (vi) The involuntary movement of the eye get controlled by
- | | |
|-----------------------------|------------------|
| a) Corneal Reflex | b) Ocular reflex |
| c) Vestibulo- ocular reflex | d) None of these |
- (vii) How many extra ocular muscles are present in the human eye?

- a) 4 b) 5
 c) 6 d) 7
- (viii) The superior oblique muscle of eye get innervated by
 a) 3rd cranial nerve b) 4th cranial nerve
 c) 5th cranial nerve d) 6th cranial nerve
- (ix) Choose which is the correct tertiary action of superior oblique muscle
 a) Intorsion b) Depression
 c) Abduction d) Extorsion
- (x) Choose which is the correct secondary action of inferior oblique muscle
 a) Extorsion b) Depression
 c) Elevation d) Intorsion
- (xi) Choose which is the correct primary action of superior rectus muscle
 a) Elevation b) Depression
 c) Intorsion d) Extorsion
- (xii) Choose the correct option for the total refractive power of cornea
 a) 30-40D b) 35-40D
 c) 40-45D d) 45-50D
- (xiii) The thickness of Dua's layer is
 a) 12micron b) 13micron
 c) 14micron d) 15micron
- (xiv) Mention the percentage of keratan sulfate present in human cornea.
 a) 78 b) 15
 c) 0.7 d) 5
- (xv) The uveal tract is supplied by sets of arteries.
 a) 4 b) 6
 c) 3 d) 5

Group-B

(Short Answer Type Questions)

3 x 5=15

2. Write a short note on the Purkinje shift. (3)
3. Explain pursuit eye movement with an example. (3)
4. Describe corneal corneal polymegathism and pleomorphism. (3)
5. Compare choroidal circulation and retinal circulation. (3)
6. List the layers of the retina from posterior to anterior, along with their physiological significance. (3)

OR

Compare the biochemical compositions of aqueous humor and tear film

(3)

Group-C

(Long Answer Type Questions)

5 x 6=30

7. Discuss the laws of extra ocular muscles movements. (5)
8. Discuss the corneal metabolism. (5)
9. Explain the antioxidant mechanism of eye. (5)
10. Discuss the protective mechanism in the eye. (5)
11. Illustrate the photo-chemistry of color vision. (5)
12. Discuss the clinical importance of the optic disc from a physiological perspective. (5)

OR

Draw the figure of visual pathway with proper leveling.

(5)
