[LP 0819] AUGUST 2019 **Sub. Code: 2732**

B. OPTOM
(New Syllabus 2018-2019)

FIRST YEAR

PAPER II – OCULAR ANATOMY AND OCULAR PHYSIOLOGY

Q.P. Code: 802732

Time: Three Hours **Maximum : 100 Marks**

Answer All questions

I. Elaborate on: **(3 x 10 = 30)**

1. Visual acuity testing.
2. What is intraocular pressure – normal range and maintenance? Write about instruments used to measure IOP.
3. Layers of retina with labeled diagram.

II. Write notes on: **(8 x 5 = 40)**

1. Colour vision testing and defects.
2. Notes on binocular single vision.
3. Layer of cornea and functions.
4. Extraocular movements – versions and vergences.
5. Structure of lens.
6. Pupillary reflexes and pathway.
7. Accommodation.
8. Functions and composition of tear film.

III. Short answers on: **(10 x 3 = 30)**

1. Parts of ciliary body.
2. Hering's and Sherington's law.
3. Endothelial pump.
4. Macula lutea.
5. Dark and Light adaptation.
6. Contrast sensitivity.
7. Presbyopia.
8. Schirmer's test.
9. Vitreous humor.
10. Muscles of iris.

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[LQ 0220] FEBRUARY 2020 **Sub. Code: 2732**

B. OPTOM
(New Syllabus 2018-2019)

FIRST YEAR

PAPER II – OCULAR ANATOMY AND OCULAR PHYSIOLOGY

Q.P. Code: 802732

Time: Three Hours **Maximum : 100 Marks**

Answer All questions

I. Elaborate on: **(3 x 10 = 30)**

1. Explain the visual pathway.
2. Anatomy of lacrimal system and drainage of tears.
3. Draw a diagram of crystalline lens and discuss about its anatomy.

II. Write notes on: **(8 x 5 = 40)**

1. Electro oculogram.
2. Tests for binocular single vision.
3. Write a note on the structures passing though superior orbital fissure with neat diagram.
4. Wald's visual cycle.
5. Pupillary reflexes.
6. Extraocular muscles and their actions.
7. Tests for dry eyes.
8. Surgical spaces of orbit.

III. Short answers on: **(10 x 3 = 30)**

1. Vision assessment in children.
2. Write any three tests for colour vision.
3. Cranial nerves supplying the eyeball and adnexa.
4. Parts of uveal tract.
5. Write briefly on the factors responsible for corneal transparency.
6. Bones forming the walls of orbit.
7. Layers of eyelid.
8. Angle of anterior chamber.
9. Worth four dot test.
10. Grades of binocular vision.

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THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[AHS 0321] MARCH 2021 Sub. Code: 2732

(AUGUST 2020 EXAM SESSION)

B.OPTOM

FIRST YEAR (Regulation 2018-2019)

PAPER II – OCULAR ANATOMY AND OCULAR PHYSIOLOGY

Q.P. Code : 802732

Time: Three hours **Answer ALL Questions** **Maximum: 100 Marks**

I. Elaborate on: **(3 x 10 = 30)**

1. Describe the anatomy of third cranial nerve.
2. Describe the anatomy of uveal tract.
3. Describe Wald's visual cycle.

II. Write notes on: **(8 x 5 = 40)**

1. Explain the layers of eyelid.
2. Explain visual evoked potential
3. Explain the lacrimal gland with diagram.
4. Explain the anterior segment of eyeball
5. Explain Hering's law of equal innervation.
6. Explain the composition of aqueous humour.
7. Explain the grades of binocular single vision
8. Explain the tests to assess lacrimal excretory function.

III. Short answers on: **(10 x 3 = 30)**

1. Write briefly on macula lutea
2. Name the layers of cornea
3. Name the bones forming medial wall, lateral wall and roof of orbit
4. Name the yoke muscles
5. What are suspensory ligaments of lens?
6. Write briefly about Horner's syndrome.
7. Write about confrontation method.
8. Write about mechanism of accommodation.
9. Name 3 tests for detecting defects of colour vision
10. Write about vergence movements of eyeball.

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THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[AHS 0422] APRIL 2022 Sub. Code: 2732

(FEBRUARY 2021 & AUGUST 2021 EXAM SESSIONS)

B.OPTOM

FIRST YEAR (Regulation 2018-2019)

PAPER II-OCULAR ANATOMY AND OCULAR PHYSIOLOGY

Q.P NO. 802732

Time: Three Hours **Answer All questions** **Maximum: 100 Marks**

I. Elaborate on: **(3 X 10 = 30)**

1. Describe Cornea under the following headings:
   a) Structure of cornea.
   b) Factors maintaining the transparency of cornea.
   c) Corneal reflex.
2. Describe the pupillary light reflex and its neuronal pathway.
3. Write in detail about ciliary body. Add a note on accommodation.

II. Write notes on: **(8 X 5 = 40)**

1. Levator palpebrae superioris.
2. Contents of orbit.
3. Composition and functions of tear film.
4. Vitreous humour.
5. Electroretinogram.
6. Maculae lutea.
7. Structure of crystalline lens.
8. Angle of anterior chamber of eye.

III. Short answers on: **(10 X 3 = 30)**

1. Rod cell.
2. Nerve supply and action of superior oblique.
3. Fibrous coat of eye ball.
4. Structures passing through inferior orbital fissure.
5. Rhodopsin regeneration in visual cycle.
6. Name the tests for colour vision.
7. Branches of ophthalmic artery.
8. Name the measurements of contrast sensitivity.
9. Erythrolabe.
10. Parts of conjunctiva.

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THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[AHS 1122] **NOVEMBER 2022** **Sub. Code: 2732**

B.OPTOM
FIRST YEAR (Regulation 2018-2019)
PAPER II - OCULAR ANATOMY AND OCULAR PHYSIOLOGY
Q.P NO. 802732

Time: Three Hours **Answer All questions** **Maximum: 100 Marks**

I. Elaborate on: **(3 X 10 = 30)**

1. Describe the orbit under following headings.
   a) Bones forming the walls of orbit.
   b) Contents of orbit.

2. Explain in detail about Visual Pathway.

3. Describe retina under the following headings.
   a) Layers of retina.
   b) Add a note on photoreceptors.

II. Write notes on: **(8 X 5 = 40)**

1. Orbicularis oculi.
2. Lens protein.
3. Structure of cornea.
4. Oculomotor nerve.
5. Anterior segment of eye.
6. Trichromatic theory.
7. Electrooculogram.
8. Presbyopia.

III. Short answers on: **(10 X 3 = 30)**

1. Structures passing through superior orbital fissure.
2. Central retinal artery.
3. Name the cranial nerves supplying the extraocular muscles.
4. Pars plana.
5. Dark adaptation time.
6. Name the glucose metabolism pathways in lens.
7. Grades of binocular single vision.
8. Phototransduction.
9. Name the branches of Ophthalmic division of trigeminal nerve.
10. Rhodopsin bleaching in visual cycle.

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THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[AHS 0423] **APRIL 2023** **Sub. Code: 2732**

B.OPTOM
FIRST YEAR (Regulation 2018-2019 onwards)
PAPER II - OCULAR ANATOMY AND OCULAR PHYSIOLOGY
Q.P. Code: 802732

Time: Three Hours **Answer All questions** **Maximum: 100 Marks**

I. Elaborate on: **(3 X 10 = 30)**

1. Describe in detail the structure, development and nutrition of Lens. Write a note on factors which maintain lens transparency and applied aspects.
2. Describe Aqueous Humour and its production. Write a note on Aqueous outflow system.
3. Describe Pupillary reflexes and their abnormalities.

II. Write notes on: **(8 X 5 = 40)**

1. Write a note on scleral apertures.
2. Enumerate the layers of retina in order with diagram.
3. Explain the lesions of optic tract with suitable diagram.
4. Enumerate extra ocular movements and the muscles involved in each movement.
5. Electrooculogram.
6. Explain the anomalies of binocular vision.
7. Explain the structure of tear film and its functions.
8. Explain vision assessment in children.

III. Short answers on: **(10 X 3 = 30)**

1. Name the layers of eyelid.
2. Diagrammatic representation of Orbital apex.
3. Name the factors responsible for maintenance of transparency of cornea.
4. Sphincter pupillae- action and nerve supply.
5. Anatomy of Nasolacrimal duct.
6. Name the Photoreceptors of Eye and enumerate their functions.
7. Write about visual cortex.
8. What is Sherrington’s law of reciprocal innervation?
9. What is entopic phenomenon?
10. What is light adaptation?

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THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[AHS 1123] **NOVEMBER 2023** **Sub. Code: 2732**

B.OPTOM
FIRST YEAR (Regulation 2018-2019 onwards)
PAPER II - OCULAR ANATOMY AND OCULAR PHYSIOLOGY
Q.P. Code: 802732

Time: Three Hours **Answer All questions** **Maximum: 100 Marks**

I. Elaborate on: **(3 X 10 = 30)**

1. Explain the Anatomy of Retina and add a note on the functions of Retina.
2. Describe the layers of Cornea and factors which maintain the corneal transparency.
3. Describe bones forming the orbit, orbital contents and applied anatomy of the Orbit.

II. Write notes on: **(8 X 5 = 40)**

1. Assessment of Visual acuity.
2. List the clinical features seen in 3rd nerve palsy.
3. Electrooculogram (EOG).
4. Draw structure of Eye ball and name its part.
5. Superior Oblique muscle -origin, insertion and nerve supply.
6. Herring's law of Equal innervation.
7. Anomalies of Colour vision.
8. Physiology of Accommodation.

III. Short answers on: **(10 X 3 = 30)**

1. List out the parts of Uvea.
2. Test for Dry eyes.
3. Write on vision assessment in Children.
4. Abnormal Pupillary reflexes.
5. What is Blepharospasm?
6. Parts of Conjunctiva.
7. Endothelial pump mechanisms.
8. Parts of Orbicularis oculi.
9. Dioptic power of Eyeball, Lens, Cornea.
10. Factors affecting contrast sensitivity.

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